

**DILLON**  
CONSULTING

COUNTY OF SIMCOE

# **Solid Waste Management Strategy**

2023 Update

April 20, 2023

County of Simcoe  
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Attention: Rob McCullough, Director, Solid Waste Management

***Solid Waste Management Strategy***

Dillon Consulting Limited (Dillon) is pleased to provide the County of Simcoe's (County) Solid Waste Management Strategy (Strategy) review. Through this Strategy, we have summarized current and upcoming regulations that could impact how waste is managed within the County and collected information on the County's waste management systems. This Strategy considers population trends and waste projections in the development of options that will enhance and improve the County's waste management systems and lays out an implementation timeline to guide the County over the next five years.

Thank you for this opportunity to assist you with this important assignment.

Sincerely,

**DILLON CONSULTING LIMITED**

Alida Kusch  
Project Manager and Associate

Our file: 20-2290

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## Acronyms and Abbreviations

Action Plan	Food and Organic Waste Action Plan
CCME	Canadian Council of Ministers of the Environment
CIF	Continuous Improvement Fund
CMO	Circular Materials Ontario
CPI	Consumer Price Index
C&D	Construction and Demolition
County	County of Simcoe
Dillon	Dillon Consulting Limited
ECA	Environment Compliance Approval
ECCC	Environment Canada and Climate Change
EFW	Energy from Waste facilities
EPR	Extended Producer Responsibility
ERRC	Environmental Resource Recovery Centre
Framework	Food and Organic Waste Framework
HHW	Hazardous Household Waste
HSP	Hazardous and Special Products
HWIN	Hazardous Waste Information Network
IC&I	Industrial, Commercial and Institutional
IFO	Industry Funding Organization
IPR	Individual Producer Responsibility
LFHW	Love Food Hate Waste
LYW	Leaf and Yard Waste
MECP	Ministry of Environment, Conservation and Parks
MHSW	Municipal Hazardous and Special Waste
MMF	Material Management Facility
MSA	Master Services Agreement
NZWC	National Zero Waste Council
Orange Drop	Municipal Hazardous or Special Waste Program
OPF	Organics Processing Facility
OWMA	Ontario Waste Management Association
Policy Statement	Food and Organic Waste Policy Statement
PRO	Producer Responsibility Organization
Province	Ontario
Q1	Quarter 1
Q2	Quarter 2
Q3	Quarter 3
Q4	Quarter 4
Regulation	O. Reg. 391/21

RFP	Request for Proposal
RPRA	Resource Productivity and Recovery Authority
RRA	Resource Recovery Alliance
RRCEA	Resource Recovery and Circular Economy Act
Strategy	Solid Waste Management Strategy
SUI	Single-Use Items
SUP	Single-Use Plastics
SWMS	Solid Waste Management Strategy
VRP	Value Retention Process
WDA	Waste Diversion Act, 2002
WDTA	Waste Diversion Transition Act
WFOA	Waste-Free Ontario Act, 2016



## Executive Summary

In 2010, the County of Simcoe (County) developed the Solid Waste Management Strategy (the Strategy or SWMS) to provide the framework for both short-term and long-term diversion and waste disposal programs for the next 20 years with reviews and updates every five years throughout the 20-year planning period. A Strategy update was initiated in 2020 following the 2015 update; however, there were several factors that delayed the completion of the Strategy update including labour shortages, impacts due to COVID-19, the fall 2022 municipal election and a public survey launched by the County where the results would inform the direction of the Strategy update.

The delays with completing the Strategy update provided the opportunity for the County to collect additional data and to gain additional insights related to the influence of the cart based collection system that was implemented on November 1, 2021 on waste streams; updated waste stream, quantities and composition including COVID-19 patterns; and ongoing updates to the Individual Producer Responsibility (IPR) program for Blue Box materials provided by the province (Ontario) that could impact waste streams.

The County has become one of the top waste diverting communities in Ontario due to the success of existing solid waste programs. However, several challenges remain which include a relatively stagnant diversion rate (approximately 61% for the past ten years), increasing per capita waste generation rate, difficulties in siting/developing waste management facilities and depleting Ontario landfill capacity. A 2022 curbside waste audit found that 61% of the garbage stream was composed of divertible material (when considering organics, recycling, textiles, electronics, scrap metal and bulky plastics) and 47% of the total waste generated (all streams) was organics (including pet waste). As the County has maximized most initiatives that can be implemented for waste diversion, a Strategy update will assist with further recommendations to improve existing programs, make progress towards reducing waste generated and address future processing and disposal needs.

The Strategy update entailed completing a current state review on the County's solid waste system, which involved research on legislation and regulations that impact solid waste, developing data sets and analyzing the data. Based on the current state review, a list of 18 potential options for the County to consider initiating were developed and a triple-bottom line analysis was completed on each option. Following the completion of the analysis, the results were discussed with the County and 15 options were recommended to carry forward for further assessment which include the following:

### Waste Collection

- **Conduct an assessment on special curbside waste collection:** Explore the feasibility of adding materials to collect curbside, increasing the collection frequency of special items and the collection frequency of LYW.

- **Evaluate recycling collection under the new IPR framework:** Complete an assessment to support negotiation with the producer responsibility organization leading the Blue Box transition collection process.
- **Review impacted ineligible properties with the transition to IPR:** Complete an assessment to review the County's ineligible properties that will be impacted due to the transition to IPR.
- **Assess guidelines for waste collection from multi-family developments:** Complete an assessment on the current and proposed multi-family developments within the County from a waste collection / servicing perspective.
- **Investigate the potential to service the industrial, commercial and institutional (IC&I) sector with organics collection:** Complete an assessment to determine the level of interest from the IC&I sector not currently using the County's organics program to use an organics curbside collection program.

#### Organics Participation

- **Assess mandatory participation in the organics program:** Increase the participation rate in the current organics curbside collection program by updating the Waste Management By-Law to require mandatory participation in the organics program.
- **Increased promotion and education (P&E) campaign and research for organics:** Increase P&E following the update to the by-law to increase resident participation in organics programs and conduct research on other successful municipal P&E campaigns to identify the best practices to promote organic program participation.

#### Waste Facilities

- **Continued development of Environmental Resource Recovery Centre (ERRC):** As the County continues with this project the processing technology to be utilized in the OPF, size of MMF based on whether or not the County will be transferring recycling (due to IPR transition), design of the OPF and MMF, site preparation and construction will need to be completed.
- **Review continued operations of household hazardous waste (HHW) depots:** Through an assessment, evaluate the risks and costs to continue to operate HHW depots since the program has transitioned to IPR as a result of the hazardous and special products (HSP) Regulation.
- **Assess the current rate schedule at County waste facilities:** Assess the total cost for services associated with waste disposal and processing of divertible material; following the assessment propose a new rate schedule to Council for approval.
- **Assess extending hours at County waste facilities:** Complete an assessment and report to Council with recommendations regarding extended hours at waste facilities.
- **Assess relocating Matchedash Waste Facility to the Medonte Closed Landfill:** Consider relocating the Matchedash Waste Facility to Medonte Landfill which is closed but has available space, is more accessible to residents and could host large scale composting operations.

- **Explore purchasing property in South Simcoe for future waste management facilities:**  
Complete an assessment of available properties needed for curbside waste transfer, public drop-off and yard waste facility.

**P&E**

- **Enhance P&E programs:** Enhance the existing P&E program to improve waste knowledge and understanding in the County of the waste services and programs that are available to the public. The goal of the P&E program is to increase participation in diversion programs and/or waste reduction.

**Other**

- **Develop a disaster debris management plan:** Develop a plan for managing waste under various disaster scenarios.

Of the options to carry forward, 12 require further assessment by the County. The assessments will include a report to Council which will only be implemented, if approved. Additionally, the remaining three options (increased P&E campaign and research for organics; enhance P&E programs; and develop a disaster debris management plan) will also be brought forward for Council's approval prior to implementation. The 15 options for the County's next planning period will support improving waste management programs and diversion rates.

## 1.0

## Introduction

In 2010, the County of Simcoe (County) developed the Solid Waste Management Strategy (the Strategy or SWMS) to provide the framework for both short-term and long-term diversion and waste disposal programs for the next 20 years. The purpose of the Strategy was threefold:

1. Provide direction for the County's waste management system through recommendations to improve waste diversion programs;
2. Make progress towards zero waste and waste prevention; and
3. Address processing and garbage disposal needs for the next 20 years.

## 1.1

### Background to Waste Management Plan Update

As part of the Strategy, it was recommended that the County conduct reviews and updates every five years throughout the 20-year planning period, with the last update taking place in 2015. Following this timeline, the next Strategy update was scheduled for 2020. The Strategy update was initiated in 2020 and was planned to be completed in 2020; however, there were several factors that delayed its completion including:

- Shortage of drivers available for waste collection which resulted in the County requiring a new methodology and schedule for collection;
- COVID-19 temporarily influenced quantities and characteristics of waste streams;
- Extended schedule into the fall 2022 municipal election period. Due to this, the final Strategy update would be reviewed/approved by the new Council. The Strategy could be utilized as a starting point and an educational tool for the County's solid waste management system, including its strengths and weaknesses and recommendations for the new Council in 2023; and
- The County released a public survey regarding collection carts and waste management programs in spring 2022 and the results have informed the direction of the Strategy update.

The delays with completing the Strategy update provided the opportunity for the County to collect additional data and to gain additional insights and understanding related to the following:

- Influence of the cart based collection system that was implemented on November 1, 2021 on waste streams;
- Quarterly monitoring of waste streams and quantities collected curbside and at depots;
- Completion of the curbside waste audits in the summer of 2022;
- Pandemic's impact on waste generation patterns; and
- Ongoing updates to the Individual Producer Responsibility (IPR) program for Blue Box materials provided by the province (Ontario) that could impact waste streams.

Since 2010, the County has become one of the top communities in Ontario for waste diversion. Although there has been much success in the County's programs, it still faces a number of challenges including:

- The County's diversion rate has remained relatively stagnant (approximately 61% for the past ten years);
- The per capita waste generation rate has decreased since 2010; however, it currently does not meet the Council-approved target of a minimum 1% annual decrease;
- The County has an increasing population with changing housing types with the move for densification;
- Siting and developing waste management facilities is becoming increasingly difficult;
- Remaining landfill capacity in Ontario and elsewhere is diminishing, with the County's landfills estimated to be full by 2027; and
- A 2022 curbside waste audit found that 61% of the garbage stream was composed of divertible material (when considering organics, recycling, textiles, electronics, scrap metal and bulky plastics) and 47% of the total waste generated (all streams) was organics (including pet waste).

With the County's variety of diversion programs and the recent changes to curbside collection programs (move to bi-weekly garbage, single stream recycling and cart-based program), the County has maximized most initiatives it can implement related to waste diversion. Updates to the County's Strategy will assist with providing further recommendations to improve existing programs, make progress towards reducing waste generated and address future processing and disposal needs.

## 1.2 Study Limitations

This study was prepared exclusively for the purposes outlined in this report and for the sole benefit of the County. This study is limited to reviewing the current municipal solid waste management services and operations for the County. For this study, solid waste refers to municipal solid waste generated or produced by its residents, as well as commercial establishments (e.g., businesses, restaurants) and institutions (e.g., schools) within the County.

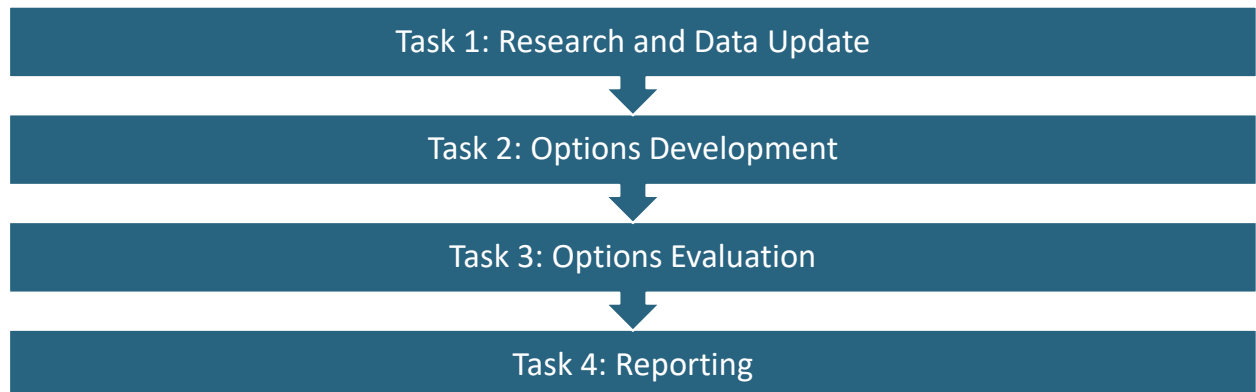
The findings of this study are based on data and information received from the County and publicly available sources. Data presented in municipal reports or obtained from municipal staff are presented as received without discretion. The material in the report reflects Dillon's best judgement in light of the information available at the time of preparation. Although a reasonable review of information was provided by the County, Dillon's analysis was by no means exhaustive. Dillon's report represents a reasonable review of the available material, within the established scope and schedule.

Any use of this report by a third party, or any reliance on, or decision based on it, are the responsibilities of such third parties. Dillon accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made, or actions based, on this report.

## 1.3 Project Approach

As a part of the Solid Waste Management Strategy update, four main tasks were undertaken to provide the County with recommendations to improve waste management programs and diversion rates (**Figure 1**) which are described in the subsections below.

**Figure 1: Our Approach**



### 1.3.1 Task 1: Research and Data Update

This task involved completing research on legislation and regulations, developing data sets and analyzing the data. As part of this task background documents provided by the County were reviewed to determine what information may be applicable to the Strategy.

The County provided data up until December 31, 2022; however, for waste tonnages the 2022 data set consists of actual tonnages from quarter 1 (Q1) to 3 (Q3) of 2022 (January to September) and estimates that were completed by County staff for quarter 4 (Q4) (October to December).

It is noted that there are ongoing changes and updates, particularly as a result of the transition to IPR. Due to this, the cut-off date for Dillon to provide up-to-date information on regulations and legislation in the Strategy was January 31, 2023.

### 1.3.2 Task 2: Options Development

Following the review of the County's documents and data updates, a list of 18 potential options for the County's consideration are provided in **Section 5.0**.

### 1.3.3 Task 3: Options Evaluation

For each of the options Dillon performed a triple-bottom line analysis. In consultation with the County, two indicators were selected for each evaluation criteria for a triple-bottom-line analysis (i.e., financial/cost, environmental and social) of each option. The selected metrics are provided in **Section**

**5.2.** Each metric was qualitatively applied and a low, medium or high ranking was assigned to the option. In consultation with the County, parameters were set for each of the six metrics for low, medium and high (e.g., parameters for costs were: low <\$100,000, medium \$100,000 to \$1,000,000 and high >\$1,000,000). As part of the evaluation Dillon also completed case studies on up to two municipalities for each carried forward option in order to supplement and inform the options evaluation. Following the completion of the options evaluation, results were discussed with the County and 15 options were recommended to carry forward for further assessment. Results of the options evaluation and details on each of the carried-forward options is presented in **Sections 5.3**.

**1.3.4****Task 4: Final Report**

A final Strategy (this report) that documents the County's current situation, population and waste generation projections, regulatory and legislation impacts to the County and recommendations for the next planning period to improve waste management programs and diversion rates was provided to the County.

## 2.0

## Current and Upcoming Regulations

The responsibility for managing and reducing waste is shared among federal, provincial, territorial and municipal governments. **Table 1** outlines the responsibilities for waste management across government jurisdictions. Understanding these responsibilities is a first step in outlining the overall legislative context for various aspects of waste management in Canada.

**Table 1: Current Waste Responsibilities in Each Level of Government**

Federal	Provincial	Municipal
<ul style="list-style-type: none"> <li>Establishes environmental priorities through the Canadian Council of Ministers of the Environment;</li> <li>Establishes approaches, best practices and standards to reduce pollutant and greenhouse gas emissions from the management of waste;</li> <li>Regulates products in the market through the Canada Consumer Product Safety Act and Consumer Protection Act; and</li> <li>Regulates the international and interprovincial movement of waste, particularly hazardous waste and recyclable material.</li> </ul>	<ul style="list-style-type: none"> <li>Establishes policies, regulations and guidelines for resource recovery and waste reduction programs (including collection, transport, processing and disposal of waste); and</li> <li>Issues approvals and monitoring of waste management facilities within the province.</li> </ul>	<ul style="list-style-type: none"> <li>Manages the collection of waste including garbage, recycling and organic waste from households, as required by Ontario legislation;</li> <li>Manages waste management services including collection, processing and/or disposal, within the IC&amp;I sector pursuant to local by-laws; and</li> <li>Manages the processing of materials that can be diverted to recycling or reuse and disposal of waste to landfill.</li> </ul>

The following subsections describe the legislative context at each level of government in which the County currently operates, anticipated upcoming regulatory changes and emerging trends.

## 2.1

### Federal Regulations

The Canadian Council of Ministers of the Environment (CCME) is an intergovernmental forum, mainly comprised of Ministers, that identifies priorities and issues of national and international concern. The Government of Canada, in particular Environment Canada and Climate Change (ECCC), work to implement policies based on environmental issues. These initiatives shape developments and trends affecting solid waste management. Significant initiatives and recent legislation include:

- A federal prohibition on select single-use plastics (SUPs);
- Consultation to address consumer confusion around products and packaging that are marketed as recyclable or compostable;



- Support for Extended Producer Responsibility (EPR) programs at the provincial level; and
- An anticipated discussion paper on a national strategy for value retention processes (VRPs).

### 2.1.1 Single-Use Plastics Prohibition

A federal prohibition on select SUPs is scheduled to come into effect over the next two years and may impact the types and quantities of single-use items received as waste in the County. On June 10, 2019, the federal government announced its intent to prohibit select SUPs. On October 7, 2020, Catherine McKenna, then Minister of Environment provided direction for action on SUPs and plans to achieve zero plastic waste by 2030.

On June 20, 2022, under the Canadian Environmental Protection Act (1999), the Government of Canada published the SUPs Prohibition Regulation (SOR/2022-138). As of December 2022, federal bans will be in place to prohibit the manufacture and import of the following six plastic products:

- Checkout bags;
- Cutlery;
- Straws and flexible straws (NB: accessibility exceptions apply);
- Foodservice ware (including black plastic, polyvinyl chloride, expanded and extruded polystyrene and oxo-degradable food containers in the form of clamshell, lidded food containers, boxes, cups, plates and bowls);
- Stir sticks; and
- Ring carriers (to be enacted June 2023).

In order to allow for SUPs in the supply chain to be used up, the prohibition on the sale of these materials will take effect one year later (i.e., effective at the end of 2023). The technical definition “single-use” in the regulation is based on physical properties that can be tested in a lab. This definition allows producers to know whether their products will be considered single-use, as it is not based on the number of times a particular item is used repeatedly by consumers. For example, a plastic checkout bag is defined as a SUP checkout bag if:

- It is made of plastic and will break or tear if it is used to carry 10 kg over a distance of 53 meters 100 times; or
- It is made of plastic and will break or tear if washed in a machine in conditions under which cloth bags would normally be washed.

The SUPs Regulation has been published in the Canada Gazette, Part II Volume 156, Number 13 and further information, including guidance for businesses to move away from the use of these SUPs, is available on the Government of Canada website.<sup>1</sup>

<sup>1</sup> Single-use Plastics Prohibition Regulations: Overview - Canada.ca; Guidance for selecting alternatives to the single-use plastics in the proposed Single-Use Plastics Prohibition Regulations - Canada.ca and Canada Gazette, Part 2, Volume 156, Number 13: Single-use Plastics Prohibition Regulations, published June 20, 2022; retrieved October 24, 2022.

## 2.1.2

**Accurate Labelling Rules**

In July 2022, ECCC released a paper on labelling rules and accepted written feedback on October 7, 2022. The discussion paper “Towards Canada-wide rules to strengthen recycling and composting of plastics through accurate labelling” addresses consumer confusion resulting from improper use of labels for products marketed as recyclable or compostable.<sup>2</sup> It will be important to understand how the federal government plans to move forward on this issue over time.

The government is proposing to prohibit the use of the “chasing arrows symbol” (also known as the mobius loop or recycling arrows, see **Figure 2**) and other communication methods (e.g., stating “100% recyclable”) on plastic products unless 80% of Canada's recycling facilities accept and have reliable end markets.

**Figure 2: Chasing Arrows Symbol**



For recycling claims to be made, it is proposed that the item would be required to be:

- Accepted in public recycling systems accessible to at least 80% of the population in one or more than five regions across Canada; and
- Able to be sorted into bales that attract a reliable, positive price on a North American end market.<sup>3</sup>

The proposed labelling rules would require producers to indicate whether the product or package is recyclable based on the above criteria and also indicate if different components are recyclable. Information regarding whether products and packaging is recyclable in one region but not another is also included. If the proposed rules are advanced, compliance mechanisms could be selected by producers. For example, a producer could choose to use a calculator system, abide by a guideline or use a third-party labelling program, as long as it meets certain minimum standards and follows a systematic approach. ECCC has also proposed putting in place auditing of producers and recyclers as part of compliance monitoring.

With regards to products claiming compostability, the consultation paper proposes that producers be required to obtain third-party certification to a specified compostability standard. As the intention is to reduce consumer confusion, new rules would prohibit producers from labelling plastic products as

<sup>2</sup> Consultation paper: Towards Canada-wide rules to strengthen recycling and composting of plastics through accurate labelling - Canada.ca

<sup>3</sup> Packaging and labelling requirements - Competition Bureau Canada

degradable, compostable and biodegradable unless certified as compostable by the third-party. Information regarding the status of the consultation continues to be updated on the Government of Canada website.<sup>4</sup>

### 2.1.3 Plastic Products Registry

To support provincial EPR efforts at the national level, ECCC has proposed establishing a federal plastics registry that would require producers to report on plastics that enter into the Canadian economy. “A Proposed Federal Plastic Registry for Producers of Plastic Products” sets out ECCC’s policy intentions, indicating that a federal plastics registry would support:

- The adoption of consistent EPR rules across Canada and support transparency and efficiency;
- The implementation and monitoring of other measures related to the federal government’s goal of zero plastic waste including having recycled content requirements for plastic products; and
- Increase value recovery rates by ensuring that more plastics enter into recycling systems.

The registry requires producers to report on plastics that enter into the Canadian economy to provide better data to the provincial government departments and authorities responsible for the administration of EPR programs (e.g., Resource Productivity and Recovery Authority (RPRA) in Ontario).

The registry can be seen as a first step that will assist with creating a baseline understanding of the management of plastic in EPR regimes and establish enforcement mechanisms at the provincial/territorial level.<sup>5</sup> The registry could assist ECCC with understanding whether EPR related policy goals such as recycling targets are met and could enable authorities to have more data on performance at a number of different points along the supply chain and within the waste management system. The proposed registry could help data requirements maintain consistency across Canada. This could facilitate the ability to compare and verify outcomes across jurisdictions and product categories. Information regarding the status of the consultation continues to be updated on the Government of Canada website.<sup>6</sup>

### 2.1.4 National Strategy on Remanufacturing and Value Retention Processes

As part of ECCC’s zero plastic waste agenda (refer to the Canada-wide Strategy and Action Plan on Zero Plastic Waste), ECCC is also developing a strategy on remanufacturing and other VRPs that can extend the use of products. As established by the International Resource Panel of the United Nations, VRPs are activities that allow for the completion or extension of a product’s service life beyond what was expected. VRPs include:

- Repair;

<sup>4</sup> Share your thoughts: Development of rules to strengthen the recycling and composting of plastics through accurate labelling - Canada.ca

<sup>5</sup> Consultation paper: a proposed federal plastics registry for producers of plastic products - Canada.ca; See: Categories of plastic manufactured items for which EPR policies are not yet in place” and “Implementation”

<sup>6</sup> Share your thoughts: Development of a proposed federal registry for producers of plastic products - Canada.ca

- Refurbishment;
- Comprehensive refurbishment; and
- Remanufacturing.<sup>7</sup>

The aim of VRPs is not only to reduce landfill waste but to also create a shift in the economic system that would increase the reuse of materials. This initiative is part of the Government of Canada's work towards a circular economy which includes other objectives such as reducing greenhouse gas emissions.

In the summer of 2021, ECCC completed a study that collected comments on the socio-economic and environmental considerations for remanufacturing and other VRPs. It aimed to collect baseline data on VRPs to promote extending the use of material or equipment in sectors including aerospace, automotive, heavy-duty and off-road equipment, electronics, home appliances and furniture.<sup>8</sup>

A discussion paper and national strategy is expected to be released; however, timing is currently uncertain.

## 2.2 Provincial

Under the Municipal Act, 2001, (S.O. 2001, Ch. 25), municipal governments (excluding the City of Toronto) are responsible for the provision of solid waste management services. This responsibility can include developing and monitoring the system and assets, service provision to the public and other operational aspects. Municipal waste management activities are governed by provincial legislation.

Provincial legislation that is significant for waste management services providers in Ontario includes:

- Ontario Environmental Assessment Act (1975);
- Ontario Environmental Protection Act (1999);
  - Regulation 101/07: Waste Management Projects;
  - Regulation 101/94: Recycling and Composting of Municipal Waste;
  - Regulation 102/94: Waste Audits and Waste Reduction Work Plans;
  - Regulation 103/94: IC&I Source Separation Programs;
  - Regulation 406/19: On-site and Excess Soil Management;
- Nutrient Management Act (2002);
  - Regulation 267/03;
- Waste-Free Ontario Act (2016);
  - Resource Recovery and Circular Economy Act (2016) and Waste Diversion Transition Act (2016);
    - Regulation 391/21: Blue Box Regulation;
    - Regulation 349/22: Amendments to the Blue Box Regulation;
    - Regulation 323/22: Subject Waste Program;

<sup>7</sup> Towards a circular economy: value-retention processes - Canada.ca

<sup>8</sup> Comments on: Environmental and socio-economic study on remanufacturing and other value-retention processes in Canada - Canada.ca

- Regulation 449/21: Hazardous and Special Products;
- Regulation 522/20: Electrical and Electronic Equipment;
- Regulation 30/20: Batteries;
- Regulation 225/18: Tires;
- Food and Organic Waste Policy Framework (2018); and
- Preserving and Protecting our Environment for Future Generations: A Made-In-Ontario Environmental Plan (2018).

Four key provincial legislations that will influence and/or have an impact on the County's strategy have been highlighted in the following subsections.

### 2.2.1 Waste-Free Ontario Act

In 2016, the Ontario Legislature enacted the *Waste-Free Ontario Act, 2016 (WFOA)* which replaced the *Waste Diversion Act, 2002 (WDA)* with a new producer responsibility framework. *WFOA* set a new course for waste diversion in Ontario and in the same year the Province enacted two Acts: the Resource Recovery and Circular Economy Act (RRCEA) and the Waste Diversion Transition Act (WDTA). These acts are important to understanding the legislative context for municipal waste management in Ontario as RRCEA and WDTA authorize the transition of the financial and operational responsibility for waste diversion programs in Ontario from municipalities to product and packaging producers.

Pursuant to the WDTA, the Ministry of Environment, Conservation and Parks (MECP) has shifted the authority for oversight of waste diversion programs from Waste Diversion Ontario to RPRA. RPRA is now responsible for the introduction of an IPR model which includes the wind-up of industry funding programs under the former model, registering producers under the RRCEA and developing oversight mechanisms including reporting. Transitioned waste diversion programs in Ontario include programs for tires, batteries, electrical and electric equipment and hazardous and special products.

On June 30, 2020, Stewardship Ontario, which was previously responsible for diversion programs under the *WFOA*, wound up the Municipal Hazardous or Special Waste ("Orange Drop") Program that provided collection services for batteries and other hazardous household waste (HHW). Presently, RPRA's Hazardous and Special Waste program provides some municipal funding for the collection, processing and disposal of HHW but does not cover all operational costs for municipal HHW programs.

### 2.2.2 Individual Producer Responsibility for Blue Box Recycling

The Blue Box program is also being transitioned to the provincial IPR model and is the most significant of the programs impacted by the shift, due to the quantity of material involved, value of municipal infrastructure investments and contracts and the complexity of removing this program from integrated waste management systems.

Blue Box Regulation 391/21, as amended by Blue Box Regulation 349/22 is the regulation that details how the transition of responsibility for the municipal Blue Box program to producers across the province will occur. The regulation sets out the timeline for transition, which is between July 1, 2023 and December 31, 2025. By January 1, 2026 producers will be responsible for financing and operating a recycling system, termed the “Common Collection System,” across the province. The significance of the regulation for municipalities is that following the transition they will have no regulated responsibility to provide Blue Box collection, processing or education.

As per the Blue Box Regulation, producers are required to meet material management targets, which outline the quantity of various types of designated Blue Box materials that need to be captured and processed. Items to be included in the Blue Box program are termed obligated materials and are defined as the following six material categories:

1. Beverage containers
2. Glass
3. Flexible plastic
4. Rigid plastic
5. Metal
6. Paper<sup>9</sup>

During the transition years (i.e., July 1, 2023 to December 31, 2025) producers will be responsible to provide the services at the same level as there was pre-transition to “eligible sources,” which are locations identified in the Blue Box Regulation and include residential homes, non-profit long-term care homes and retirements homes, schools,<sup>10</sup> and some public spaces. Producers will be required to collect materials that are designated as “eligible materials” that fall into one of the six material categories.

When the IPR program is fully in place across the province (i.e., in 2026), the products and packaging accepted in the Blue Box may differ from that which is currently accepted by the County. Notably, books and a number of other packaging like products will not be included and the obligation for producers is to meet the management target overall versus accepting a particular list of specific products and packages.

Producers can fulfill their obligations under the Blue Box Regulation by signing a written agreement with a Producer Responsibility Organization (PRO) which acts on their behalf to provide collection services, processing, reporting and other services. RPRA is responsible for providing oversight and administration for the Blue Box program which includes ensuring that PROs self-organize to provide the services required under the Blue Box Regulation.

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<sup>9</sup> A seventh category, for certified compostable products and packaging, was also created but there are no management targets associated with it. The regulation applies in so far as to require documentation from producers about the quantities of these products entering the market.

<sup>10</sup> Schools covered under the regulation include buildings that contains a school or private school within the meaning of the Education Act

### Implications for the County

The IPR Blue Box transition will require planning and decision-making by the County. Municipalities will no longer have a statutory obligation to provide any Blue Box services as of their transition date, which is January 1, 2024 for the County. However, some municipalities may opt to provide limited services for customers that are not eligible to receive services under the IPR program, such as ineligible IC&I customers and municipal-owned facilities (e.g., libraries, recreation centres).

Over the next few years PROs will establish and operate the collection and management of recycling from eligible sources in Ontario and will be working with municipalities to transition Blue Box programs to the new IPR model. Circular Materials Ontario (CMO) is the Administrator of the common collection system. Municipalities who make decisions to continue to play a role may choose to enter into service contracts and agreements with CMO. The terms of service within the agreements will set out requirements for municipalities to deliver materials to CMO's choice of processing facility, although details such as their location and penalties for perceived failures are unknown at this time. County staff have been directed by Council (June 14, 2022) that they may enter into negotiations with CMO and/or determine whether to enter into agreements for the collection, depot and promotion and education services with CMO.

In addition to determining how waste will be collected once the IPR program has been introduced, Ontario municipalities, including the County, need to consider impacts to other components within the integrated waste management system, such as:

- Updates to communications materials and communications plans, including call centre scripts, responses to complaints, promotion and education distribution, internal communications, etc.;
- Updates to by-laws;
- Development charges, since recycling services will no longer be supported by the tax base;
- Enforcement mechanisms, for example if garbage bins are contaminated with recycling;
- Avoiding stranded assets, such as Blue Boxes or other municipal-owned containers;
- Staffing levels and the potential to reallocate staff to other areas; and
- Waste diversion metrics, since the standardized methodology (the Generally Agreed Principles of WDO/RPRA's annual Datacall reporting system) will no longer be relevant.

### 2.2.3 Food and Organic Waste Policy Statement

On April 30, 2018, under the RRCEA, the MECP released the Food and Organic Waste Framework (Framework) which sets as its vision, "A circular economy that moves towards zero food and organic waste and zero greenhouse gas emissions from the waste sector." With the aim to prevent, reduce and rescue food waste in order to reach provincial Climate Change Action Plan targets, the Framework aims to reduce food and organic waste, recover resources from food and organic waste, support resource recovery infrastructure and promote beneficial uses of recovered organic waste. The Framework



contains two components: The Food and Organic Waste Action Plan (Action Plan) and The Food and Organic Waste Policy Statement (Policy Statement).

Together the Action Plan and Policy Statement prioritize food waste reduction and recommend that municipalities create food waste reduction promotion and education programs. It also advocates for the rescue of surplus food waste through partnerships with food rescue organizations or the use of technology to improve logistics and safety for food redirection. Further, it indicates the types of food and organic wastes that should be diverted and includes a section that recognizes the emergence of compostable products and packaging and indicates the need for industry standards, new recovery technology, and promotion and education. The Framework indicates that an organics disposal ban is coming at an unconfirmed date, likely following the summer of 2026.

The Policy Statement provides targets for various levels of government, institutions (including hospitals, schools and retailers) and commercial entities (including producers) that the province has an interest in organic waste reduction and recovery. It also sets organic waste reduction and diversion targets for several sectors and communities. The targets vary depending on the region, population and population density and range in requiring between a 50 to 70% reduction, with target dates ranging from 2023 to 2025.

#### Implications for the County

The following summarizes the policy's diversion targets and timelines that are applicable to the County, by each sector:

- Municipalities that provide source separated food and organic waste collection shall maintain or expand these services to provide residents access to convenient and accessible collection services. Other collection methods, such as directing disposal streams to mixed waste processing, may be used to support the collection of additional materials. Target: 70% waste reduction and resource recovery of food and organic waste generated by single-family dwelling in urban settlement areas by 2023;
- Multi-unit residential buildings shall provide collection of food and organic waste to their residents. Source separation is preferred but alternatives to collecting this stream may be used if it demonstrates that provincial targets can be met. Best practices need to be implemented and buildings need to promote and educate residents to increase participation. Target: 50% waste reduction and resource recovery generated at the building by 2025;
- The Policy Statement provides direction to certain groups under the industrial and commercial sectors (e.g., retail, office, restaurants, hotels, motels, large manufacturing) based on the quantity of food and organic waste generated each week. Target: Ranges from 50% to 75% waste reduction and resource recovery, depending on the quantity of food and organic waste generated in the facility by 2025; and



- Educational institutions and hospitals, subject to O. Reg. 103/94, that generate more than 150 kg of food and organic waste per week shall source separate that stream. Target: 70% waste reduction and resource recovery generated in the facility by 2025.

#### 2.2.4 Amendment to Environmental Assessment Act, Landfills

A January 2022 amendment to the Environmental Assessment Act affects new landfill siting requirements to make the process more complex. Section 6.0.1 now requires that a proponent who would like to establish a waste disposal site obtain municipal support from each adjacent local municipality.<sup>11</sup> The new requirement for adjacent municipal support is necessary if the new proposed site is within 3.5 kilometres from another municipal boundary and 3.5 kilometers from any residential use anywhere within the boundary of the municipality siting the landfill. The support needs to be granted through each municipality's council resolution process. This requirement applies to all proposals currently in an environmental assessment process and, according to a City of Toronto staff report to Council, "effectively gives each adjacent municipality veto power over the development of the landfill."<sup>12</sup>

##### Implications for the County

According to the Ontario Waste Management Association, if current disposal trends continue and new landfills are not built, Ontario's landfill capacity will be exhausted by 2032.<sup>13</sup> The issue of limited remaining landfill capacity in Ontario is two-fold; existing landfills are filling quickly, the overall opportunity in Ontario to expand landfills is limited and siting a new landfill has proven to be difficult, as it has not happened in decades.

#### 2.3 Emerging Trends

Legislative changes are on the horizon (i.e., accurate labelling rules, plastic products registry, national strategy for VRPs, landfill organics ban) and new regulations (i.e., SUPs prohibition, Blue Box IPR, organic waste targets, changes to environmental assessments for landfills). These changes are potentially highly significant for the waste industry and for municipalities. They illustrate a trend towards thinking of waste not only at the disposal stage but also at manufacturing and use stages. IPR considers producers' responsibility for the production of materials and not only its end-of-life management. In addition, the concept of a circular economy has gained momentum and is a trend that provides a variety of opportunities for municipalities to reduce waste.

<sup>11</sup> Environmental Assessment Act, R.S.O. 1990, c. E.18 (ontario.ca) Consolidated format Jan 1, 2022

<sup>12</sup> Report for Action to Infrastructure Committee, May 10, 2021. "Update on Environmental Assessment Act Amendments Affecting Future Residual Waste Disposal Considerations (toronto.ca)" Agenda Item History - 2021.IE22.9 (toronto.ca) Retrieved August 31, 2022.

<sup>13</sup> Landfills (owma.org)

2.3.1 **New Approaches: Circular Economy**

The availability of disposal capacity in Ontario is limited. Due to future capacity constraints, it is critical that municipalities, including the County, consider alternative waste management options, reduce the amount of waste requiring disposal and secure cost effective long term disposal capacity. Future options could include building or contracting with energy from waste (EFW) facilities, securing new landfill capacity, adopting zero waste strategies and/or exporting waste to other jurisdictions. It could also entail the adoption of new processes and approaches to waste management.

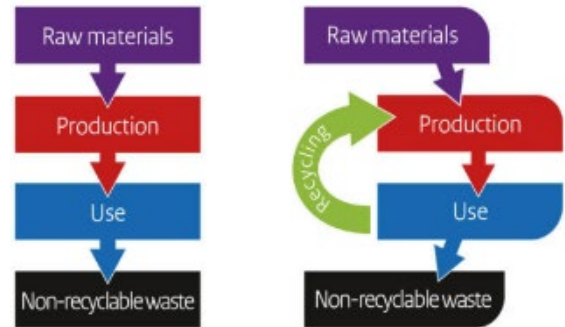


Figure 3: Linear and Recycling Approach

Recycling has long been understood as a main mechanism to divert waste from landfill. Recycling depends on the input of materials captured following their useful life. The current waste management approach includes the extraction of raw materials to production to usage and ultimately to disposal; this economic system is a linear approach. In an economy based on recycling, such as the County’s current system, materials are reused to reduce the amount of waste going to landfill (Figure 3<sup>14</sup>).

**Circular Economy Approach**

The guiding principles of a circular economy are to keep resources in the economy as long as possible by recirculating them back into the economy through recycling, refurbishing or repurposing. It is a shift in systems thinking, from linear systems (make-use-waste) to closed loop systems (make-reduce-use-reuse-remake) (Figure 4<sup>15</sup>). By using waste as a resource to be recycled rather than disposed of and prioritizing regenerative resources, this cradle-to-cradle thinking is what characterizes the circular economy.

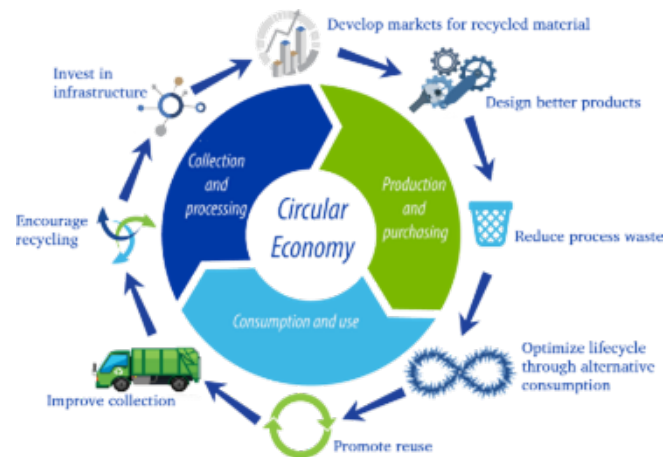


Figure 4: Circular Economy

<sup>14</sup> <https://www.government.nl/topics/circular-economy/from-a-linear-to-a-circular-economy>

<sup>15</sup> <https://rco.on.ca/circulareconomy/>

## 3.0

## Waste Management System

The County provides a range of waste management services to over 350,000 residents in approximately 150,000 residential units and approximately 5,300 ineligible commercial units<sup>16</sup>. Residential units are primarily single family households; however, it does include some eligible condominiums, multi-family buildings and cottages on private roads. This does not include waste management services to the separated Cities of Barrie or Orillia which is provided by the two municipalities. Waste management services include:

- Curbside collection of garbage, recycling and organics;
- Seasonal curbside collection of leaf and yard waste (LYW);
- Special collection events such as annual Christmas tree, curbside battery, electronics, and textiles (i.e., clothing);
- Year round user paid call-in bulky item collection;
- Eight waste management facilities for drop-off of waste, recycling, organics and other divertible materials. This includes five HHW depots;
- The management of three operational landfills and 32 closed landfills; and
- Five leaf and yard waste composting sites.

Historical information based on the previous Strategy and subsequent update, waste generation data and an overview of the County's solid waste management system are presented in the following sub-sections.

## 3.1

### Historical Waste Information

The County's vision for long-term solid waste management from the 2010 Strategy indicates that the County:

- Continues to be a leader in diversion performance;
- Has secured, cost effective, long-term capacity to process diverted materials and residual wastes;
- Makes best use of available, fully permitted landfill capacity; and
- Has flexibility in the system to align with legislation changes (e.g., IPR programs) and the overall Provincial waste management system.

This vision continues to guide the delivery of the County's waste management system and the 2015 Strategy update references that over 25 of the Strategy's major recommendations had been undertaken by the County. The 2018 Solid Waste Management Strategy Annual Report<sup>17</sup> refers to the successes that

<sup>16</sup> 2020 Datacall, noting that these are total eligible units and not necessarily serviced units

<sup>17</sup><https://www.simcoe.ca/SolidWasteManagement/Documents/Solid%20Waste%20Management%20Strategy%20Annual%20Report.pdf>

waste management has realized including improved curbside collection, improved waste management facilities and explored opportunities to extend or maximize the life of the County's landfills.

### 3.1.1 2010 Strategy Initiatives Updates

The initiatives that the County has moved forward with, reviewed and/or decided not to pursue from the 2010 Strategy and 2015 Strategy Update are highlighted in **Table 2**.

**Table 2: 2010 Strategy and 2015 Strategy Update Initiatives Status**

Initiative	Status
<b>Curbside and Facilities Diversion</b>	
<b>2010 SWMS</b>	
Enhance Current Reduction and Reuse Programs	Complete, Ongoing
Promotion and education initiatives to promote reduction and reuse	Complete, Ongoing
Restrictions on curbside garbage set outs (PAYT)	Not approved by Council
Establish a Per Capita Waste Reduction Target	Complete, Ongoing
Develop Re-Use Centres, Programs and Partnering Initiatives	Complete. Not viable.
Develop and implement pilot re-use events in key supporting communities	Complete. Not viable at County level.
Permanent re-use centre(s) at County facilities	Complete. Not viable.
Implement Green Procurement Policy for County Facilities	Complete
Endorse Extended Producer Responsibility and Waste Minimization Legislation	Complete, Ongoing
Enhance Existing Waste Diversion Depot Program	Complete, Ongoing
Clear Garbage Bag Program	Not approved by Council
Increase Recycling Container Capacity	Complete
Bi-Weekly Garbage Collection	Adopted 2020
Enhanced Advertising, Promotion and Education	Complete
Public Open Space Recycling Pilot Program	Complete. Not viable at County level.
Special Events Recycling Pilot Program	Complete, Ongoing
Examine Diversion of IC&I Materials	Complete
Mandatory Diversion By-law	Not approved by Council
<b>2015 Update</b>	
Expand Materials Accepted in Curbside Organics Collection	Complete
Examine Level of Service for LYW Waste Collection (curbside)	Complete
Examine Level of Service at County Waste Facilities	Complete
Expand Diversion at County Waste Facilities	Complete, Ongoing
<b>Recycling, Reduction and Reuse</b>	
<b>2010 SWMS</b>	
Processing of Recyclables Outside of Simcoe County	Complete
Develop Recyclables Processing Capacity Within the County (new MRF)	Not Complete
<b>2015 Update</b>	
Advocacy	Complete, Ongoing
Rewards Program	Not approved by Council
Food Waste Reduction	Complete, Ongoing
Disposal Bans	Ongoing
<b>Composting</b>	

<b>Initiative</b>	<b>Status</b>
<b>2010 SWMS</b>	
Processing of Organics Outside of Simcoe County	Complete
Develop Organics Processing Capacity within the County (new organics processing facility CCF)	Ongoing
<b>Curbside Collection</b>	
<b>2010 SWMS</b>	
Collection Contract for weekly recycling and co-collection of garbage and organics (July 2012 to June 2017)	Complete
Transition to Uniform Collection Service	Complete
Next Collection Contract (July 2017 Start)	2013 Contract completed in November 2021
Reducing the Garbage Limit (from 8 to 4)	Complete
Standard Garbage Container Size	Complete 2021
Mandatory Diversion By-law	Not approved by Council
Reduce the "Double-up" Program	Completed in 2021
<b>Transfer</b>	
<b>2010 SWMS</b>	
Final Determination of Short-term Transfer Requirements	Complete. Not viable option with County material volumes.
Develop Short-term Transfer System	Completed with Oro in 2021
Longer term Transfer System	Ongoing
<b>Garbage Disposal and Mixed Waste Processing</b>	
<b>2010 SWMS</b>	
Modifications to Current Operating Landfills	Complete, Ongoing
Garbage Export - Short Term	Complete
Complete Approvals (Design and Operations Plans) for Sites 9 and 12	see 2015 Update Initiative
Garbage Export - Long Term	Complete
Consideration of Residual Garbage Processing	Ongoing
<b>2015 Update</b>	
Assess Mixed Waste Processing	Ongoing
Closure of Sites 9 and 12	Ongoing
Preserve One-year of Emergency Capacity at Site 11: Oro Landfill	Complete, Ongoing
Export Facility Garbage on Closure of Site 2: Collingwood Landfill	Ongoing

## 3.1.2

**Waste Generation**

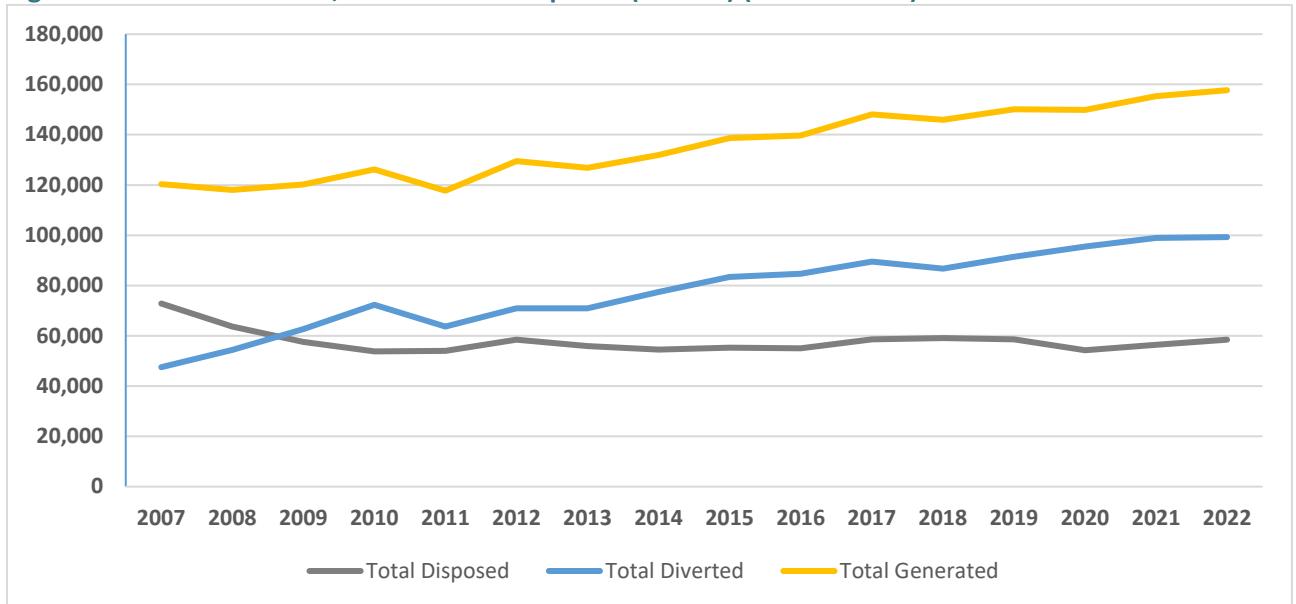
**Table 3** lists the quantities of material managed curbside and at County waste management facilities for the past seventeen years. The 2022 data consists of actual tonnages from quarter 1 (Q1) to 3 (Q3) of 2022 (January to September) and estimates that were completed by County staff for quarter 4 (Q4) (October to December). In 2022 there was an increase in the quantity of curbside garbage collected and a minimal decrease in curbside diversion tonnages, resulting in less than a 1% decrease in curbside diversion. Between 2020 and 2021 there was a 13% increase in the weight of the curbside organics collected and between 2019 and 2020 a 7% increase in curbside diversion. These are assumed to be attributed to the program changes that occurred between 2019 and 2021 as well as the impact of the COVID-19 global pandemic (see **Section 3.2**).

**Table 3: Managed Tonnages and Direct Diversion Rates (2006 to 2022)**

Source	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Curbside Garbage (Tonne)	51,837	52,580	48,714	38,089	38,393	39,285	39,034	37,795	37,999	39,484	40,062	41,453	42,272	41,118	36,892	36,941	40,709
Curbside Diverted Materials (Tonne)	24,570	27,380	33,087	39,907	39,780	38,418	41,187	40,444	41,299	43,533	43,893	44,657	47,325	51,303	61,576	61,087	65,902
Total Curbside Tonnes Collected	76,407	79,960	81,801	77,996	78,173	77,703	80,221	78,239	79,298	83,016	83,954	86,110	89,596	92,421	98,468	98,027	106,611
Curbside Diversion Rate (%)	<b>32%</b>	<b>34%</b>	<b>40%</b>	<b>51%</b>	<b>51%</b>	<b>49%</b>	<b>51%</b>	<b>52%</b>	<b>52%</b>	<b>52%</b>	<b>52%</b>	<b>52%</b>	<b>53%</b>	<b>56%</b>	<b>63%</b>	<b>62%</b>	<b>62%</b>
Facilities Garbage (Tonne)	25,252	20,255	14,967	19,450	15,407	14,759	19,475	18,101	16,484	15,758	14,902	17,126	16,890	17,476	17,425	19,487	17,722
Facilities Diverted Materials (Tonne)	20,664	20,137	21,313	22,764	32,589	25,258	29,799	30,474	36,144	39,810	40,853	44,895	39,436	40,176	34,221	37,882	33,366
Total Facilities Tonnes Collected	45,916	40,392	36,280	42,214	47,996	40,018	49,273	48,575	52,628	55,568	55,755	62,021	56,325	57,651	51,646	57,368	51,088
Facilities Diversion Rate (%)	<b>45%</b>	<b>50%</b>	<b>59%</b>	<b>54%</b>	<b>68%</b>	<b>63%</b>	<b>60%</b>	<b>63%</b>	<b>69%</b>	<b>72%</b>	<b>73%</b>	<b>72%</b>	<b>70%</b>	<b>70%</b>	<b>66%</b>	<b>66%</b>	<b>65%</b>
Total Garbage Collected (Tonne)	77,089	72,835	63,681	57,539	53,800	54,044	58,509	55,896	54,483	55,241	54,964	58,578	59,161	58,594	54,318	56,256	58,431
Total Materials Diverted (Tonne)	45,234	47,517	54,400	62,671	72,369	63,676	70,986	70,918	77,443	83,343	84,745	89,552	86,760	91,478	95,814	98,968	99,266
Total Tonnes Collected	122,323	120,352	118,081	120,210	126,169	117,720	129,495	126,814	131,926	138,584	139,709	148,130	145,922	150,072	150,132	155,224	157,698
County Diversion Rate	<b>37%</b>	<b>39%</b>	<b>46%</b>	<b>52%</b>	<b>57%</b>	<b>54%</b>	<b>55%</b>	<b>56%</b>	<b>59%</b>	<b>60%</b>	<b>61%</b>	<b>60%</b>	<b>59%</b>	<b>61%</b>	<b>64%</b>	<b>64%</b>	<b>63%</b>

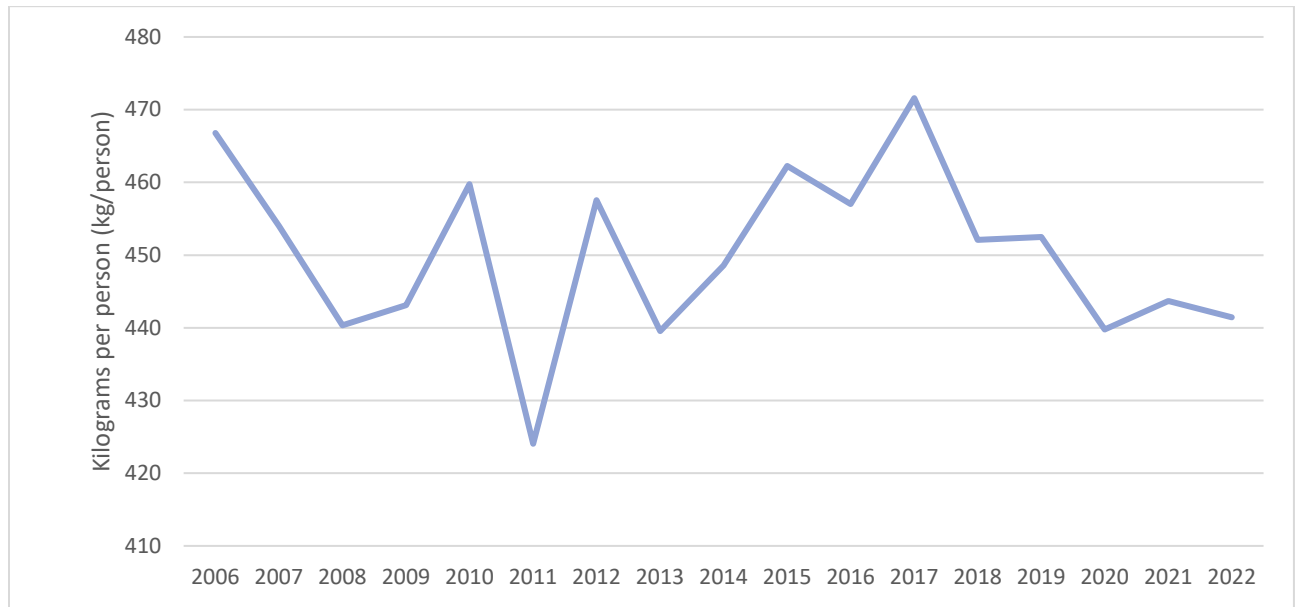
Extrapolating data from **Table 3, Figure 5** highlights the total amount of waste managed from 2006 to 2022.

**Figure 5: Waste Generated, Diverted and Disposed (Tonnes) (2006 to 2022)**



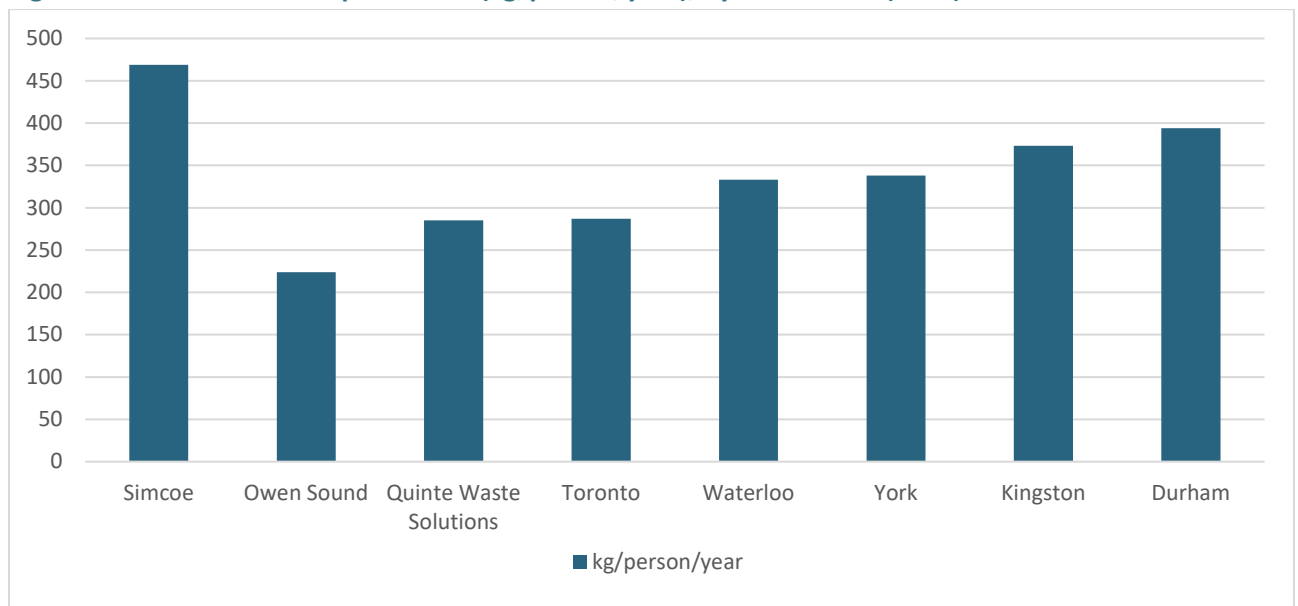
The County provided historic waste generation and population data which was analyzed for overall generation values. Over the past 17 years, the amount of waste generated per person has varied across the County (**Figure 6**). The lowest amount of waste generated per person in 2011 was 424 kg/person/year while the highest was in 2017 at 472 kg/person/year. On average, 450 kg/person/year was generated in the County over the past 17 years. The reduction since 2017 could be attributed to the recent changes in the County’s waste management programs such as bi-weekly garbage collection and changes to a cart-based collection program.

**Figure 6: Waste Generated per Person (kg/person/year) (2006 to 2022)**



Based on the RPRAs reporting data that was provided by the County (which differs from **Figure 6** due to the recent 2021 census data requiring corrections to the previous population estimates), the total residential waste generated was 469 kg/person/year with 296 kg/person/year being diverted and 173 kg/person/year being disposed in 2021. For comparison, the 2021 (RPRAs) residential total waste generated by kg/person/year for Ontario jurisdictions with similarities to the County are highlighted in **Figure 7**.

**Figure 7: Waste Generated per Person (kg/person/year), by Jurisdiction (2021)**

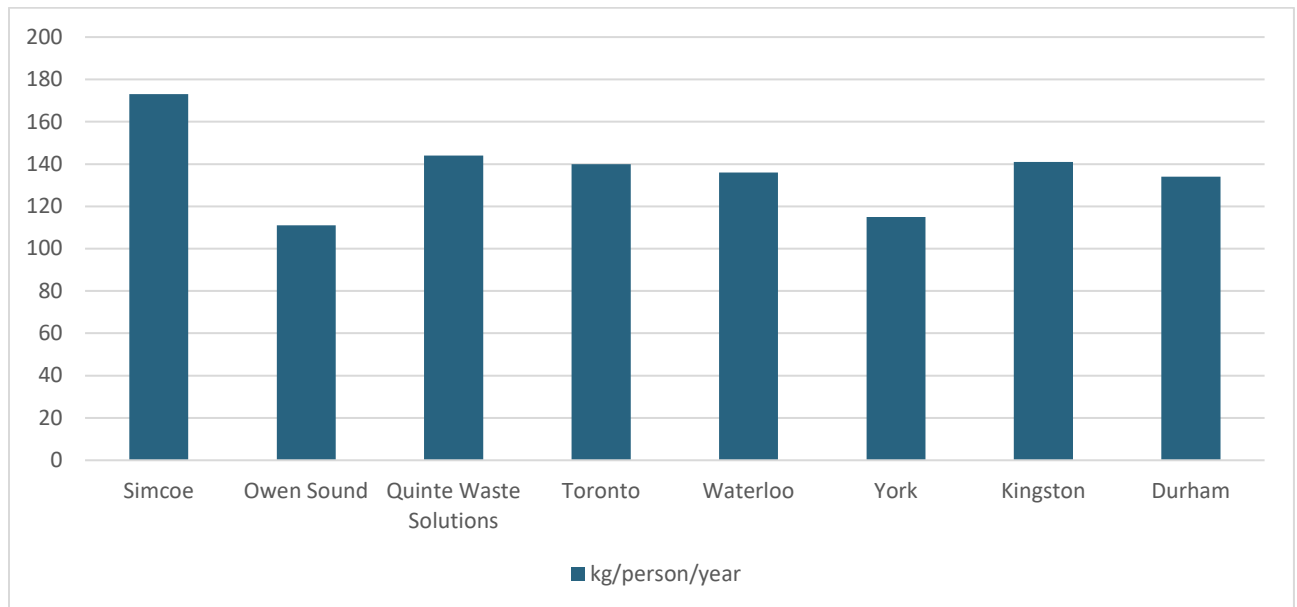




It is noted that County residents and some Ontario municipalities have private transfer stations. Therefore, tonnage information in the annual Datacall does not necessarily reflect the waste generated in those municipalities.

Based on the RPRA reporting data that was provided by the County, the County (173 kg/person/year) has a high total residential waste disposed per year. For comparison, the 2021 residential waste disposed by kg/person/year for Ontario jurisdictions, identified by the County, with similarities to the County, are highlighted in **Figure 8**.

**Figure 8: Waste Disposal per Person (kg/person/year), by Jurisdiction (2021)**



### 3.1.2.1

#### Current Waste Composition

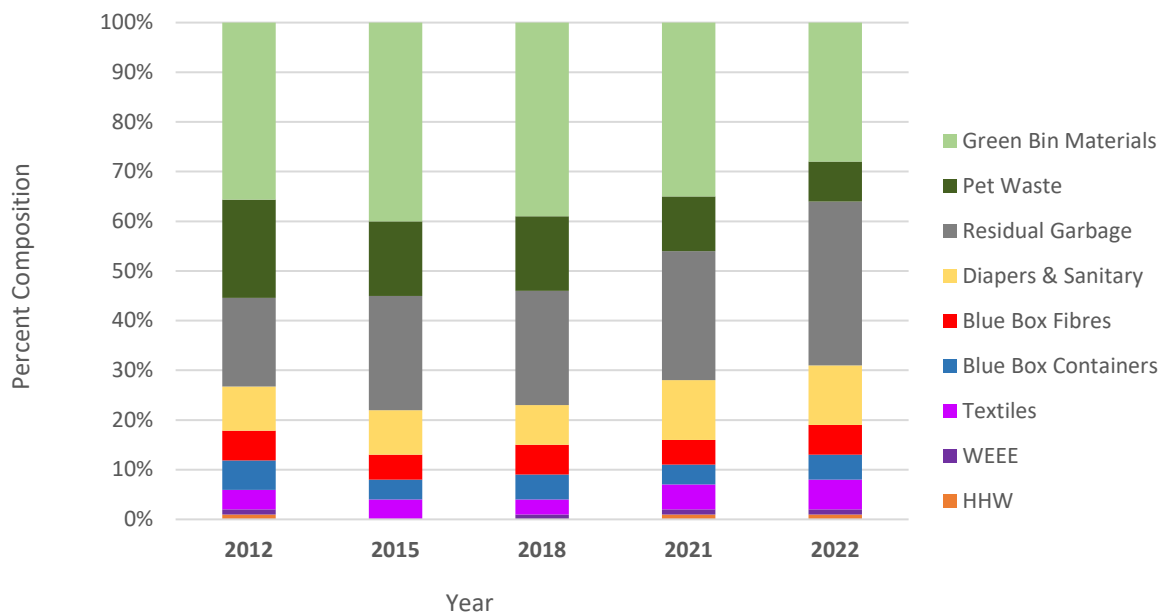
In 2022 the County collected 40,709 tonnes of curbside garbage that were either sent to County landfills or exported outside of the County for disposal/processing; 65,902 tonnes of materials were collected for recycling, composting and/or diversion. Waste composition studies for the County have been completed in 2012, 2015, 2018, 2021 and 2022. The most recent studies indicate that there are materials being placed in the garbage stream could be diverted through the County's existing curbside programs. A four season audit in 2017/2018 found that 84% of recycling and 43% of organics that was generated was captured in the appropriate streams; whereas the remaining percentage was disposed of as garbage. The audit from fall 2021, which is the last audit completed prior to the introduction of the County's new cart-based program (see **Section 3.2.1**), found that 89% of recycling and 61% of organics that was generated captured in the appropriate streams with the remaining percentage disposed of as garbage. In 2022, following the County's introduction of the new cart-based program, three audits were completed in the winter, spring and summer. The audit results indicated that organics has decreased to 28% (36% with pet waste) and the Blue Box recycling has increased to 11% in the garbage stream from the 2021 audits. On average, the 2022 audits found that 87% of the recycling and 67% of the organics

that is generated is captured in the appropriate waste stream with the remaining amount disposed as garbage.

The quantity of curbside recycling has increased from 2021, with approximately 1,700 additional tonnes (6.4%) collected. It is expected that the volume of recycling has increased even more substantially since the implementation of the cart program. Recycling set-outs are covered from the weather year-round, which limits snow, rain and other precipitation from affecting the material. Saturated and wet recycling, especially in the paper stream, can greatly impact the overall weight of the material. In 2020, the Continuous Improvement Fund (CIF) funded a study to determine the impacts of moisture on recycling. The report found that moisture from the elements added upwards of 22% more weight.

The quantity of organics present in the waste streams has increased by 14%. A number of factors could be contributing to this, including; societal changes that cause more time to be spent at home (i.e., working from home); therefore, more waste is generated in the residential streams, and changes in consumption behaviours that cause higher rates of organics. The most recent audit data found 29% of the organics stream was comprised of avoidable food waste (i.e., food that could have been consumed, but was wasted). Overall curbside set-out tonnage results are provided in **Figure 9**.

**Figure 9: Garbage Composition Results (2012 to 2021)**



The 2021 and 2022 audits highlight, with respect to the recycling and organics streams collected curbside, that there was contamination in both residential recycling (2021: 15% and 2022: 16%) and the organics stream (2021: 1% and 2022: 2%). These results indicate that on average, households are using the recycling and organics streams to recycle (versus using to dispose of garbage). However, based on

the contamination rate of recycling there may be some “wishful” recycling occurring where residents are either hopeful, or believe, that a product or material is recyclable or ought to be recyclable.

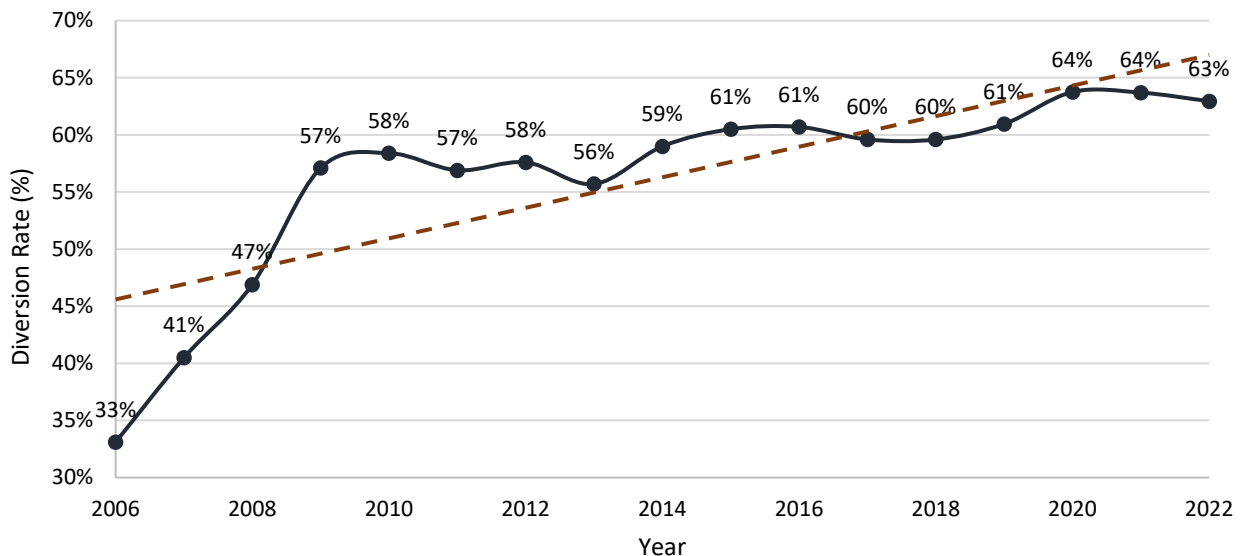
The 2018 audits were completed prior to the addition of pet waste in the organics program and it is not indicative of the 2021 bi-weekly garbage program change or single stream recycling impacts. The 2022 garbage audit was completed after the new curbside collection contract began with the carts to obtain updated results that reflect the current program. This is generally completed every third year as per the original Strategy recommendation.

3.1.2.2 Curbside Diversion

The County’s waste diversion rate has been between 60% and 64% for the past five years; however, over the past 17 years there has been an increase of 27% diversion. This is given as a direct diversion rate and includes industrial, commercial and institutional (IC&I) tonnages and does not account for residuals generated after processing. It is not reflective of the County’s overall diversion rate which is determined through the completion of the annual RPR Datacall.

According to the 2021 RPR Datacall, the County is ranked second amongst 98 other municipalities in Ontario<sup>18</sup> in terms of waste diversion rate. Since 2009, the diversion rates have remained relatively consistent at approximately 60% from 2009 to 2021. **Figure 10** shows the annual diversion rate from 2006 to 2022 based on the County’s submission to the RPR Datacall along with the increasing trendline.

Figure 10: Annual Diversion Rates (2006 to 2022)



<sup>18</sup> RPR 2021 Residential Waste Diversion Rates by Municipal Program. More information about the 2021 Datacall results can be found at: <https://rpra.ca/programs/about-the-datacall/>

## 3.1.2.3

**Waste Management Facilities Diversion**

The County currently has eight waste management facilities that collect and process material dropped off by residential and IC&I customers. **Table 4** summarizes the waste management facilities and identifies the activities of each facility. All eight of the waste management facilities accept garbage, recycling and other divertible materials.

**Table 4: County Waste Management Facilities**

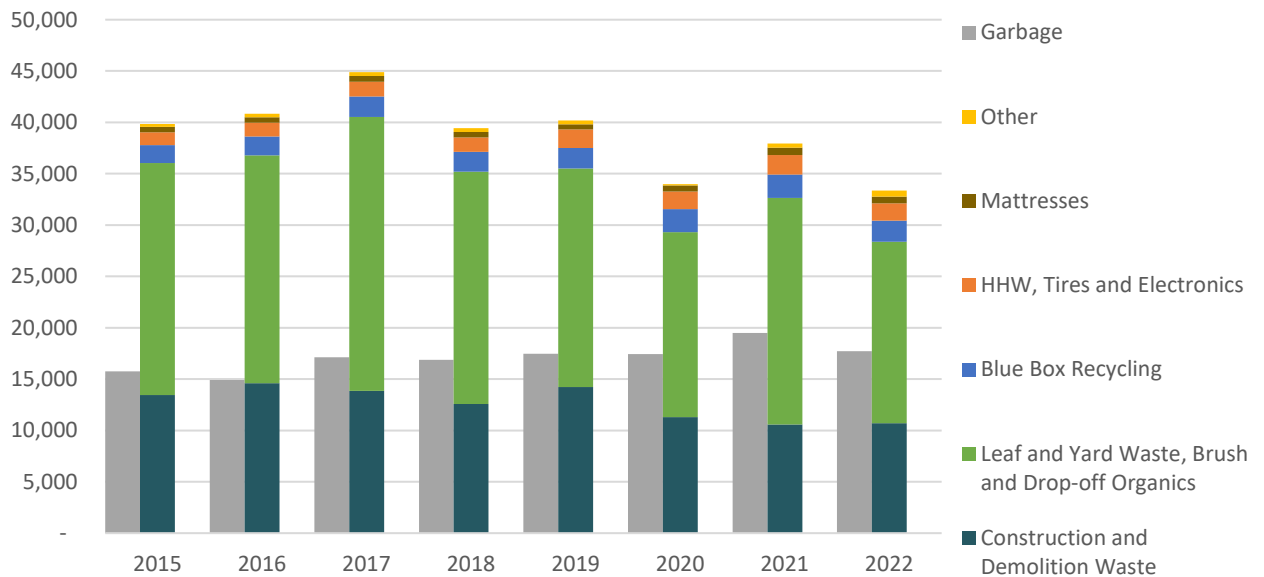
Waste Management Facility	Public Waste Facility	Active Landfill	HHW Depot	LYW Composting
Collingwood	✓	✓		
Mara	✓			
Matchedash	✓			
Nottawasaga	✓	✓	✓	✓
Oro	✓	✓	✓	✓
Tosorontio	✓		✓	
Bradford West Gwillimbury	✓		✓	
North Simcoe	✓		✓	✓

In addition to these waste management facilities the County also operates two LYW composting facilities at two closed landfill sites, Alliston and Wasaga Beach.

In 2022, there were 18 diversion programs offered at County waste management facilities. Materials accepted include construction and demolition (C&D) waste (concrete rubble, scrap metal, asphalt shingles and drywall), LYW/brush, wood waste, organics, Blue Box recyclables, HHW, tires, electronics, mattresses and box springs and other items. Some programs have also been cancelled, such as window pane glass, due to the lack of end markets for these materials. This highlights the need to promote local business development.

For the past 17 years, these diversion programs have resulted in approximately 550,000 tonnes of material being diverted from the landfill and an average facility direct diversion rate of 64%. This includes both residential and IC&I material dropped off at the waste management facilities. **Figure 11** illustrates the amount of diverted material dropped-off at facilities compared to garbage from 2015 to 2022. Note that in 2018 a \$75/tonne fee was instituted for brush which resulted in significant decrease in brush tonnages.

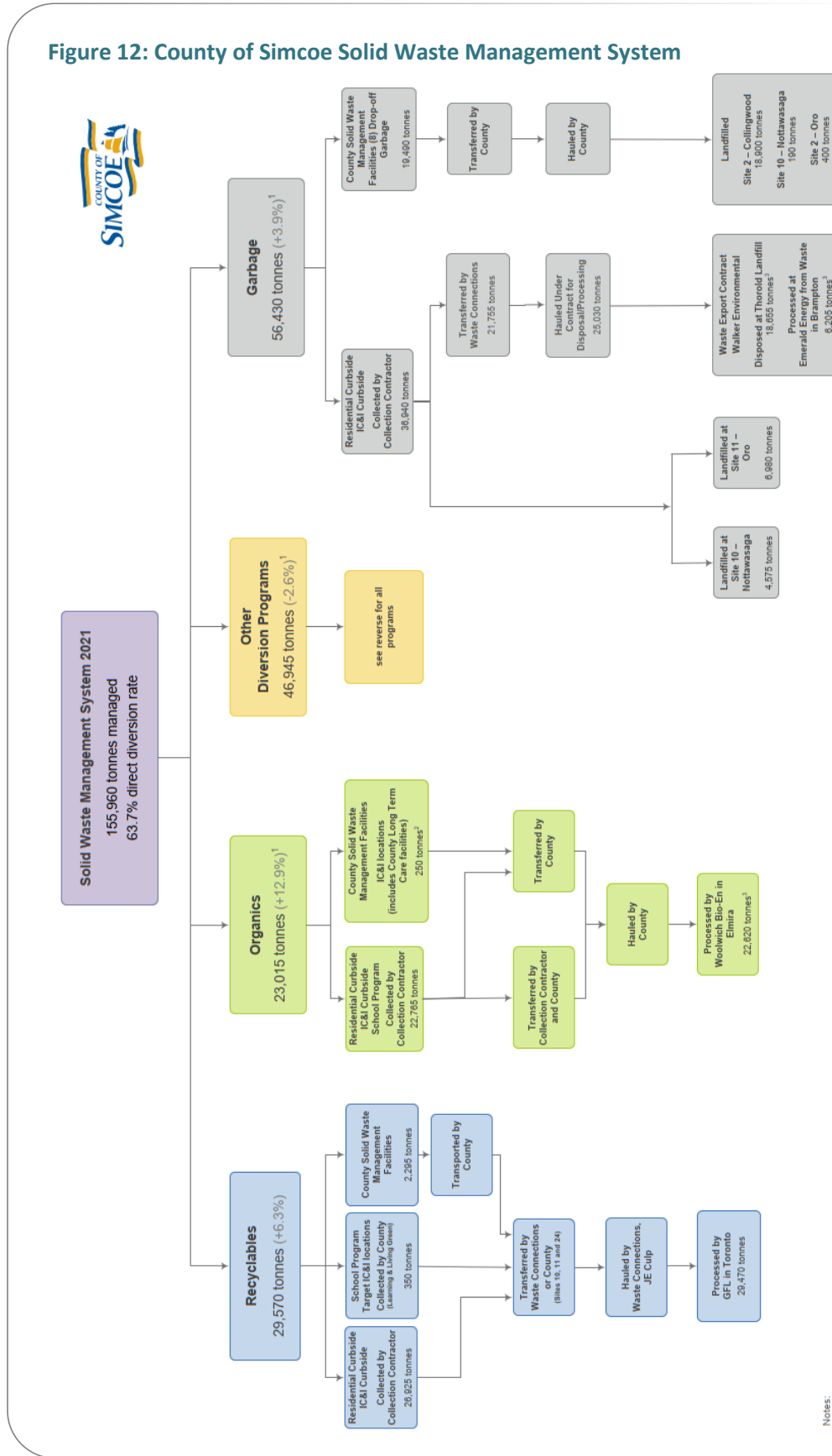
**Figure 11: Waste Management Facilities Collected Tonnages, Drop-off (non-curbside) Materials (2015 to 2022)**



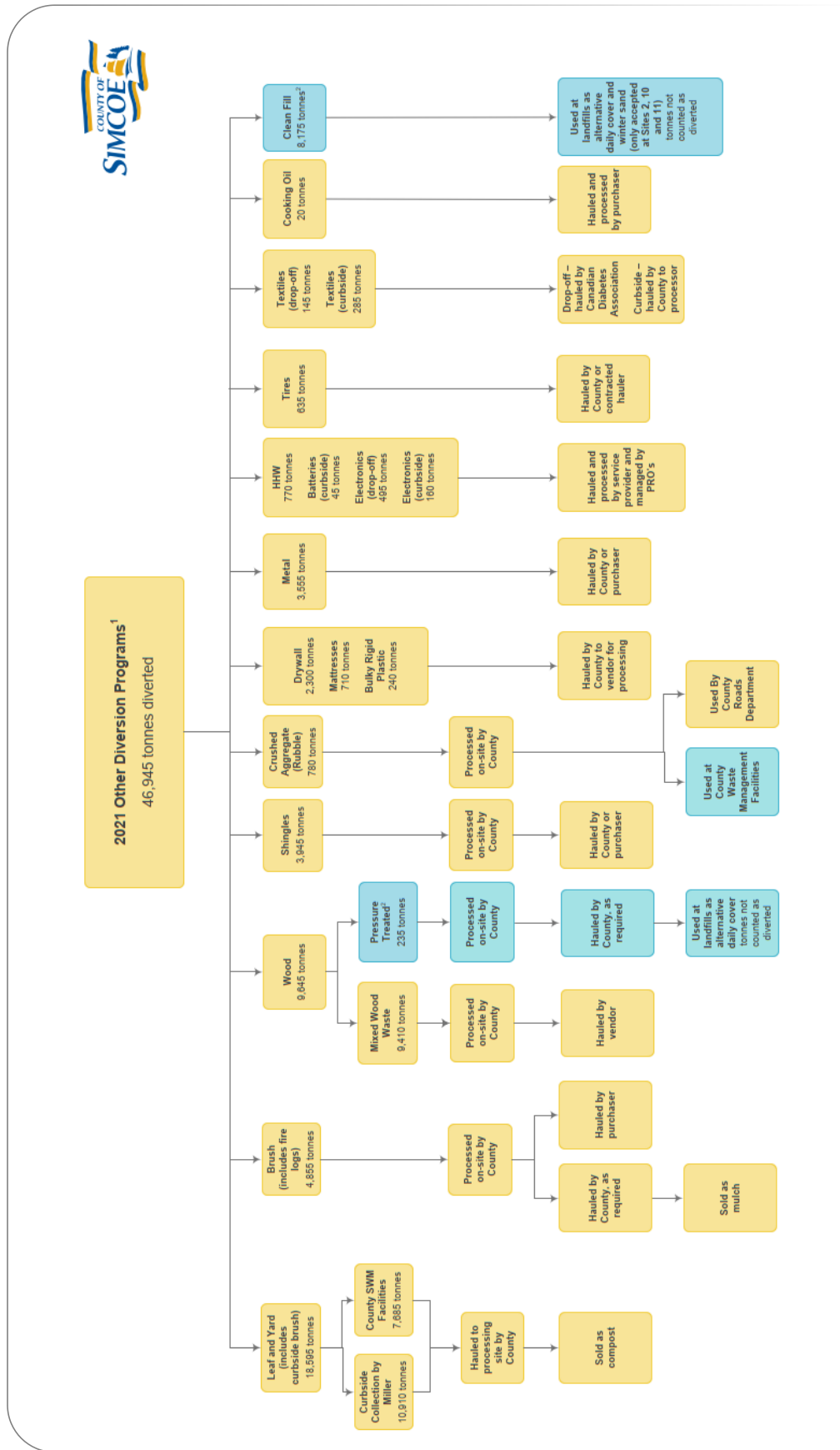
### 3.2 Solid Waste Management System Overview

An overview of the County’s solid waste management system, created by the County, is presented in **Figure 12**. This illustrated process details where solid waste materials, that are collected curbside and dropped off at waste management facilities, ends up going and includes the 2021 tonnage data.

Figure 12: County of Simcoe Solid Waste Management System



Notes:  
 1. (%) denotes change from 2020 (if greater than 2%).  
 2. Tonnage includes material managed from Casino Rama on a fee-for-service basis.  
 3. Organics and garbage tonnages impacted by transfer operations (such as liquid loss).



Notes:  
 1. 'Other Diversion Programs' tonnage includes Waste facilities diversion programs and curbside-collected leaf & yard waste and brush, batteries, electronics and textiles.  
 2. Not counted as diversion since utilized on a landfill as alternative daily cover.

### 3.2.1 Curbside Overview

The County offers curbside collection services to all eligible units for organics, recycling, garbage and LYW. As of 2022, a call-in bulky item collection program is currently offered year-round (previously offered from June through to September). Overall collected tonnes for the call-in bulky program were lower in 2022 compared to pre-COVID program tonnes and the overall diversion of bulky program material was also lower in 2022 at 31% (has been as high as 49% in previous years). Under the previous system when bulky materials were collected by the curbside collection contractors the diversion rate was approximately 1%, annually.

A “Serviced Unit” is defined by the County as a property upon which can be located in a single family home, multi-family homes (up to and including five units per one piece of property), IC&I units, and any combination thereof, located in the collection area provided that these units have been approved by the Director for waste collection services.

In February 2020, the County changed its weekly collection program to a bi-weekly collection program. Currently, curbside collection of garbage, recycling and organics is provided to all eligible residents on a four-day collection schedule (previous to November 1, 2021 the County had a five-day collection schedule). Garbage and single stream recycling is collected bi-weekly on alternating weeks and organics is collected weekly. As a result of moving to bi-weekly collection, the County has witnessed an approximate 50% increase in the amount of organics being placed in the organics cart on a per unit basis, corrected for growth. This is a significant increase to the curbside diversion program; however, a large portion of organics is still being placed in the garbage. In addition to the collection schedule change on November 1, 2021, the County rolled out a new automated cart collection system for garbage, recycling and organics. Despite significant increases in participation with the new carts, over 1,000 units have refused delivery of organic carts which indicates that there are some units who still do not participate in curbside organics.

In the automated cart system, each material is stored and set out in wheeled carts. This reduces the need to carry containers to the curb for collection and results in less labour and increased safety for waste collection personnel. The size of the carts were selected based on average County household waste tonnages and accounted for future needs. Cart sizes are 360 litres for recycling, 240 litres for garbage and 120 litres for organics with the option to exchange carts for smaller sizes (garbage to 120 litres and recycling to 240 litres or 120 litres). There is a \$50 per cart fee for exchange; this accounts for related administrative costs. Since offering a cart exchange program for residents who wish to exchange their recycling and garbage carts for a smaller size at no cost to change, 6.5% of serviced units elected to request a smaller sized cart.



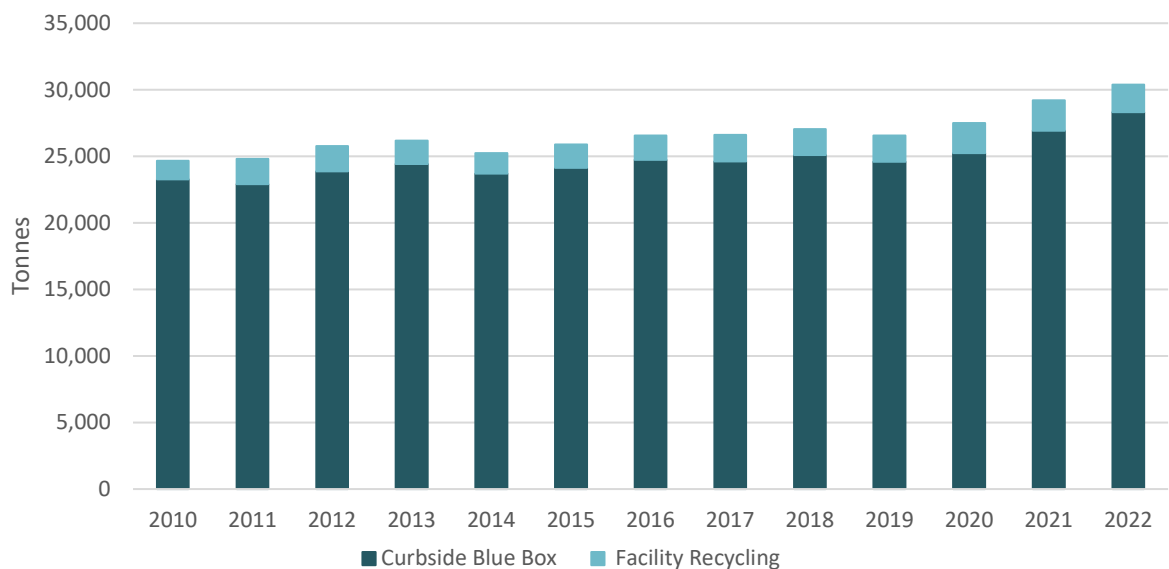
3.2.1.1

**Blue Box Recycling**

Ontario Regulation 101/94 under the Environmental Protection Act of 1990 states municipalities with a population of 5,000 and over with a waste collection and disposal service must offer recycling services to its residents.<sup>19</sup> As of February 3, 2020, the County switched from a dual stream recycling collection system to a single stream recycling system collected bi-weekly. The County collects the majority of recyclable materials that can be recovered and marketed. In 2022, there was a total of 28,328 tonnes of Blue Box recycling material collected curbside and 2,047 tonnes collected at the waste management facilities<sup>20</sup>.

**Figure 13** shows the tonnage of Blue Box materials collected from 2010 to 2022. The recycling capture rate increased from 85% (2017) to 87% (2022) based on the waste audit data provided by the County. With the higher capture, contamination has also increased from 8% to 16%; however, this increase was expected with the additional households participating in the recycling program and with the switch to single stream. In January 2024 the County will transition recycling to IPR, along with the separated Cities of Orillia and Barrie (noting that Barrie will transition in May, 2024).

**Figure 13: Tonnes of Recycling Managed (2010 to 2022)**



<sup>19</sup> Government of Ontario. “Environmental Protection Act Ontario Regulation 101/94 Recycling and Composting of Municipal Waste.” *Government of Ontario*, 2011, <https://www.ontario.ca/laws/regulation/940101>. Accessed 20 April 2021.

<sup>20</sup> Due to changing to a single stream collection in 2021 OCC was only tracked as a separate stream for the beginning of 2020. Therefore, so that the numbers are not skewed and do not misrepresent OCC diversion, OCC for 2015 to 2020 was combined with facility recycling.

## 3.2.1.2

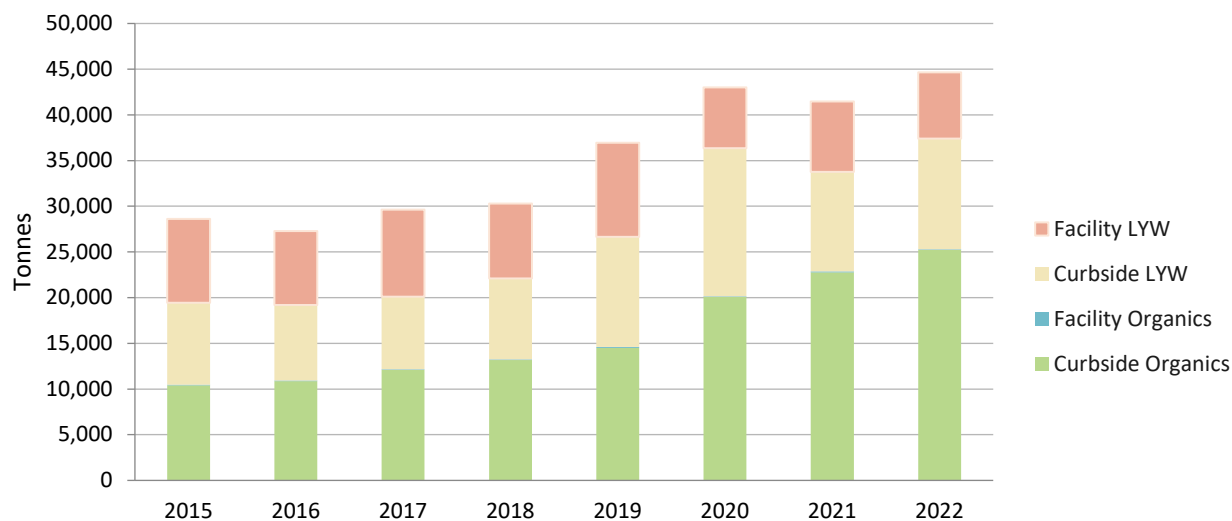
**Organics**

The County has been providing weekly organics collection since the program was implemented in September 2008. Materials that are currently accepted include food waste, soiled paper products, pet waste (added in fall of 2018), cold wood ashes, dryer lint, feathers and hair. Materials that are not accepted include plastics, diapers, cigarette butts, feminine hygiene products, LYW and vacuum bags. Organics may be placed loose, in paper or certified compostable bags in the cart. LYW is collected separately on a bi-weekly basis during specific weeks in spring, summer and fall for a total of eleven LYW collection events per household (four spring, two summer and five fall collections). Additionally, the County runs two collections for Christmas trees which does allow LYW if any were missed in the fall. LYW may be placed in hard rigid containers or paper yard waste bags for curbside collection.

In the most recent curbside audit (2021 to 2022) conducted on curbside organic waste, 62% of the material was food waste, 25% was pet waste and 10% was paper based products such as tissues, paper plates and other paper packaging (not including Polycoat paper cups). The overall residue from the audit was significantly less than 2019 audit results, 1.4% in 2021 compared to an average of 3.2% in 2019.

In 2022, 24,861 tonnes of organics and 10,160 tonnes of LYW waste were collected curbside through Q1 to Q4. Additionally, 79 tonnes of organics and 7,359 tonnes of LYW were collected at the waste management facilities. **Figure 14** shows the amount of organic material managed from 2015 to 2022.

**Figure 14: Tonnes of Organics Managed (2015 to 2022)**



In 2022, LYW collected from depots was slightly less than 2021 (approximately 7,360 tonnes in 2022 compared to 7,690 tonnes in 2021). LYW collected from depots increased in 2021 in comparison to 2020 with 6,600 tonnes collected. Curbside LYW was static between 2021 and 2022 (10,900 tonnes in 2021 compared to 10,160 tonnes in 2022).

An increase in tonnes collected for organics over the last several years could be a result of increased population, higher participation rates and/or additional materials such as pet waste, kitty litter and animal bedding being accepted in the program. However, in 2020, 2021 and 2022, curbside organics collected were higher significantly than prior years. This is assumed to be due to the switch to bi-weekly collection, the roll-out of the new cart program and more people working from home as a result of the COVID-19 pandemic.

The capture rate for organics has also increased from 2017 (36%) to 2022 (67%) based on waste composition studies. Increased capture of this material has also resulted in decreased contamination rates (2% in 2022 versus 3% in 2017).

### 2021 Cart Program Survey

From May to July 2022, the County conducted a satisfaction survey on the newly implemented automated cart collection system. Participants included residents (both permanent and seasonal) and small business owners. The survey was available to complete over a six-week period via telephone or online. The intent of the survey was to understand the level of satisfaction of the new cart program, identify common waste management habits and inform the development of new services and programs to improve waste management within the County.

The survey concluded that 88% of the 5,650 respondents were satisfied or very satisfied, with only 6% indicating they were unsatisfied or very unsatisfied, particularly due to the usability of the new carts and reliability of waste collection services. However, some residents were less satisfied with the frequency of waste collection and would prefer collection to occur on a weekly basis rather than the current bi-weekly services. Another concern of the 6% of dissatisfied respondents was the issue of storing carts out of the direct line of sight of the road and sidewalks. Conclusions drawn from the survey by the County indicated that the majority of dissatisfied respondents were seasonal residents who have unique obstacles and/or challenges and may be less familiar with the program. Other key findings included that the majority of respondents use the organics program regularly, try to select items which reduce package waste, and use both the Mobile App and annual waste calendar as their source of information for waste management.

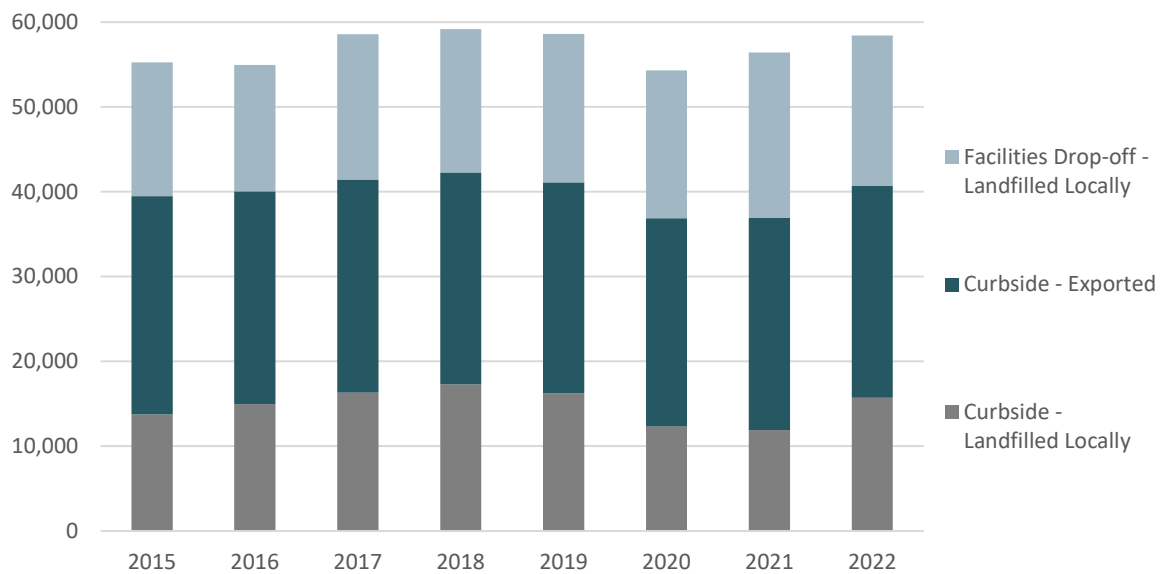
### 3.2.2 Garbage

The County currently operates eight waste management facilities including three active landfill sites (Nottawasaga, Oro, Collingwood) and manages an additional 32 closed landfill sites. Since the 2015 Strategy Update, the Tosorontio landfill reached its approved landfilling capacity in 2017 but is still operating as a waste management facility. Garbage collected curbside is either disposed at the Nottawasaga and Oro landfills or exported to private sector disposal facilities in Ontario and garbage received at waste management facilities is disposed at the Collingwood landfill.

In 2022, the County managed 58,431 tonnes of garbage; 40,709 tonnes of garbage were collected curbside and 17,722 tonnes were dropped-off at County facilities. In order to extend capacity at County landfills, approximately 25,000 tonnes of curbside waste was exported by Walker Environmental to Thorold Landfill in Niagara. As of 2022, 62% of the County’s curbside garbage is exported. The implementation of various facility diversion programs and shredding of all waste management facility garbage have also shown to contribute to extending County landfill capacity. **Figure 15** illustrates the tonnes of garbage managed from 2015 to 2022.

Curbside garbage collected in the County is only 39% comprised of materials that are classified as “garbage” (when considering organics, recycling, textiles, electronics, scrap metal and bulky plastics). The additional 61% of materials could have been diverted through existing County programs.

**Figure 15: Tonnes of Garbage Managed (2015 to 2022)**



### 3.2.3 Landfill Capacity

Landfill surveys are completed annually to measure the County's remaining landfill capacity based on the volume consumed. Using that information and the annual fill rate (i.e., tonnes disposed annually), the closure years of the landfills can be estimated. **Table 5** details the remaining estimated capacities based on 2022 tonnages and the estimated closure years for the three active landfills.

**Table 5: Remaining Landfill Capacity and Estimated Closure Year**

Waste Management Facility	Remaining Capacity (m <sup>3</sup> )	Estimated Closure Year <sup>1</sup>
Oro	259,571	2027 <sup>2</sup>
Nottawasaga	50,576	2025
Collingwood	90,678	2023

1. Based on 2022 tonnages.
2. Assumes one year of emergency disposal capacity is preserved at Oro. Material from Nottawasaga will be directed to Oro once Nottawasaga closes.

Collingwood is projected to close in late 2023, Nottawasaga in 2025 and Oro in 2027. It is noted that the County is keeping approximately one year's disposal capacity at the Oro landfill available as a future emergency measure. Also, these figures were developed based on surveys completed in December 2022. The amount of material to be exported will be increased following the Collingwood landfill closure which will increase costs. The County's new garbage processing and disposal contract started November 1, 2021 and will expire October 31, 2029 (based on three additional one-year extensions) which is when the last of the County's landfills is expected to close. The County has sought solutions to long-term disposal in the past; however, the only reliable outcome for the County has been the export of garbage to landfill or incineration.

The County's estimated timeline of four to six years for landfill closure will also be when most landfills in Ontario are at capacity based on Ontario Waste Management Association's (OWMA) latest annual landfill report. Based on the current landfill capacity depletion rate, the OWMA's website countdown clock estimates that Ontario has approximately 10 years left of provincial landfill disposal capacity. If the United States were to prohibit waste from crossing the border, this figure would be significantly reduced.

The OWMA 2021 Landfill Report states that Ontario's current landfill capacity issue is centred around the approval process for new and expanded landfill sites, mainly that the process is excessively long (over 10 years), costly and there is uncertainty on whether a positive outcome would be accomplished. Due to this, there are limited investments for both private and public projects for new or significantly expanded landfill sites.

In February 2020, Bill C-204 was introduced to the House of Commons of Canada to amend the Canadian Environmental Protection Act, 1999 and was passed in February 2021. This enactment

prohibits the export of certain types of non-recyclable plastic waste to foreign countries, including the United States, for final disposal. The County's exported waste currently remains within Ontario; however, this could impact the County as Ontario's landfills reach capacity.

The County's main concern surrounding diminishing disposal capacity is based on the provincial approval process. Therefore, the County will prioritize engaging with organizations such as the Regional Public Works Commissioners of Ontario, the Association of Municipalities of Ontario and the OWMA, advocating to the provincial government for responsible provincial solutions to the problem of disposal capacity. Additionally, staff will continue to engage with neighbouring municipalities on long-term local solutions for the management of garbage; however, due to the limited amount of garbage tonnes generated locally, processing options such as incineration are less economically attractive for the County.

#### 3.2.4 Environmental Resource Recovery Centre (ERRC)

Since 2010, the County has been working on the ERRC currently under development at 2976 Horseshoe Valley Road West, Springwater. This centre will provide a local Organics Processing Facility (OPF) as well as a Material Management Facility (MMF). A Development Strategy was prepared to consider Planning approvals, Environmental Compliance Approval (ECA), procurement of design and construction of the MMF, and procurement of processing technology and construction of the OPF.

While the size of the OPF has not been finalized it will be capable of processing all of the County's organics into resources such as compost, fertilizer or soil amendment. With limited transfer capacity in the County, the MMF will be a cost-effective transfer solution, providing a central location for the consolidation of waste from collection vehicles before being sent to processing and disposal facilities. The size of the MMF is still being determined due to the unknown factor on what role the County will play on curbside recycling due to the provincial changes taking place in respect to transition under the Waste Free Ontario Act and IPR for Blue Box recycling.

The ERRC has had a number of delays to the project schedule; however, the ERRC is an integral part of the County's long term waste management strategy to reduce transfer and haulage costs and produce valuable resources from the OPF that can be utilized locally.

#### 3.2.5 Education Programs

The County has a Learning and Living Green school program which is a partnership between the County and four local school boards (approximately 100 public and private schools) that provides collection of both recyclable and organic materials at elementary and secondary schools. The program is unique in that it mirrors the residential waste program with the objective to increase waste reduction and diversion and reduce waste both in the schools and at home. Children play a significant role in influencing adult behaviour so by educating students in the importance of waste reduction and how to properly participate in a school setting, this will also impact their parent's behaviours at home. The

County assists in on-boarding these student-run waste diversion programs while also offering presentations, training and promotion and education materials. These offers also extend to community outreach groups County-wide. The County's mobile app 'Simcoe County Collects' features a new education tool called 'Simcoe Sorts'. It is a digital waste sorting game which is available online and can be accessed by schools, community groups and residents of all ages. The County will continue to expand its education programs through digital mediums which can be accessed remotely or in-person.

### 3.2.6 Service Level Review

In 2019 the County undertook a Strategic Facility Service Level Assessment Study (Study) for the purpose of identifying areas within the current operations that could be improved to increase diversion in the County. The Study focused on examining the demographic and frequency of use of the County's waste facilities, common materials brought in and general operational efficiencies and inefficiencies such as wait times and facility layout. During this Study there were two major events (labour shortages in the curbside collection service and the declaration of a state of emergency due to COVID-19) which may have impacted the results.

The Study utilized various data collection methods including facility visits, staff interviews and an online survey. The survey generated over 2,700 responses of which 258 were non-users of the waste facilities. The survey found the majority of respondents that identified as users of the facility were males between the ages of 51 and 70. Over 50% of respondents use the County's waste facilities at least once every three months, with the North Simcoe Facility having the highest volume of visits and Matchedash having the lowest. The most commonly dropped off material by residents was garbage. Overall, respondents were satisfied with the services provided by the County's waste facilities; however, some suggestions for improvement included better signage, lower fees for certain materials, better communication of information, extended hours and more waste facilities that accept HHW.

Based on the findings from the Strategic Facility Service Level Assessment, it was recommended that once COVID-19 restrictions were lifted within the County a reassessment of the utilization of the sites be conducted. The results of this assessment showed the post-COVID-19 trends of peak days and hours have changed compared to the historical data. In 2021 Saturday was still a peak day at most of the facilities; however, Tuesday's and Thursday's have spiked in visitation at some facilities. High volume hours of day also changed from between 11:30 and 2:30 to 10:30 and 2:30.

### 3.2.7 Service Providers

The County has contracts with dozens of companies to assist with the delivery of waste services. **Table 6** displays a summary of the main contractors, materials collected, area serviced and contract end dates. New contracts and request for proposals (RFP) statuses are also indicated in the table.

**Table 6: Summary of Current Service Providers**

<b>Waste Contract</b>	<b>Current Contractor</b>	<b>Contract Expiry Date</b>	<b>New Contract/RFP Status</b>
Curbside Collection (Garbage, Recycling, Organics, Annual Curbside Battery Collection)	Miller Waste Systems	September 30, 2028	Miller Waste Systems started contract November 1, 2021
Recycling - Transfer	n/a County managing transfer services	n/a	County took over transfer services December 1, 2021
Recycling - Haulage	JE Culp Transport Ltd.	January 1, 2024 Option to renew for 2 x 1-year extensions	RFP for contractor started November 1, 2021
Curbside Special Collections (Seasonal LYW, Christmas Trees, Annual electronics and Textile Collections)	Miller Waste Systems	March 31, 2024	Miller Waste Systems started April 1, 2022
Garbage - Transfer and Haulage	JE Culp Transport Ltd.	January 1, 2024 Option to renew for 2 x 1-year extensions	New contract started November 1, 2021
Waste Export and Garbage Processing	Walker Environmental Group	December 31, 2026 Option to renew for 3 x 1-year extensions	New contract started November 1, 2021
Blue Box Recyclables Processing	GFL	December 31, 2023 Option to renew for 4 x 6-month extensions	Contractor started October 1, 2021
Bulky Plastic Processing	GFL	September 30, 2023 Option to renew for 4 x 6-month extensions  Additional contract: Pnewko Brothers (for curbside collection bin/cart drop-off)	GFL started October 1, 2021  Pnewko Brothers started October 31, 2021
Organics Processing	Cornerstone Renewables	September 30, 2023 Option to renew for 3 x 1-year extensions	Recently extended for a 1-year term



4.0

# Waste Projections

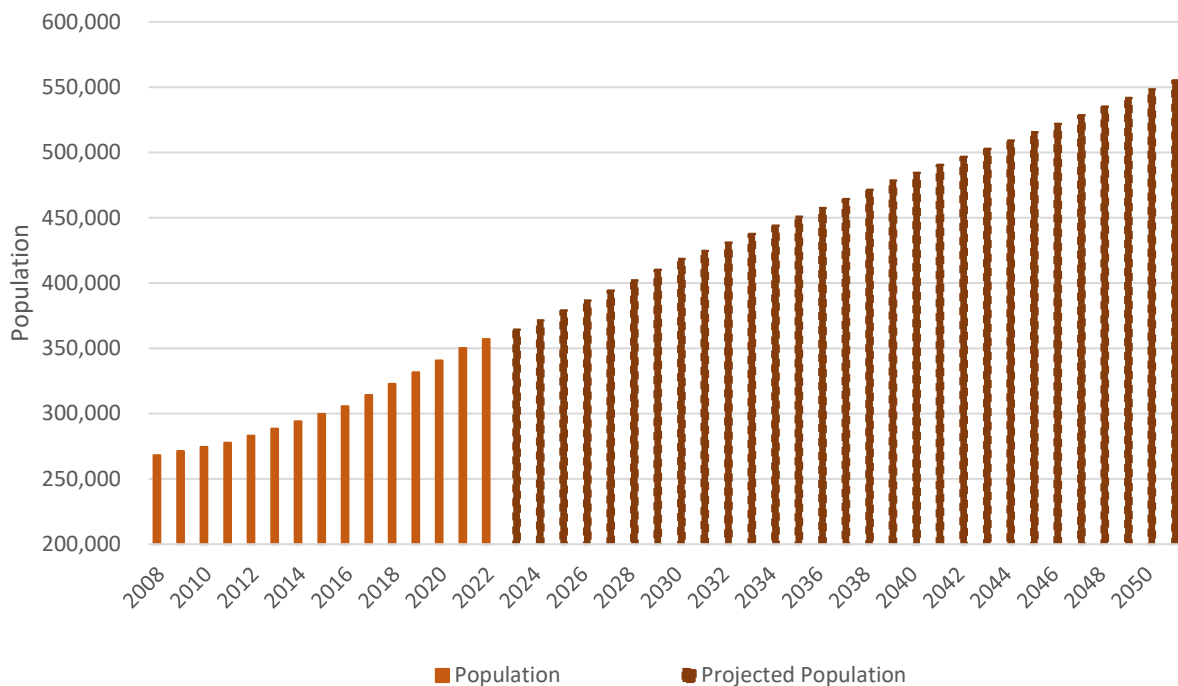
Population projections were completed based on data provided by the County and waste projections assumed no changes to existing solid waste management disposal and diversion programs. Waste generation (kg/capita) and diversion rates calculated for 2022 were used to project disposal and diversion tonnages for 2023 to 2051. Waste generation values for 2022 were selected since historical data indicates that waste tonnages are remaining stagnant or slightly decreasing over time.

4.1

## Population Trends

The population changes between 2008 and 2051 and the annual population growth or decline for the County is presented in **Figure 16**. It is noted that County growth projections should be confirmed in future strategic planning and execution work as COVID-19 has influenced immigration and emigration trends in ways that are not yet fully understood and should be investigated further as this will have an impact on waste management. Projections were based on population data provided by the County. The projected populations over the entire planning period are illustrated in **Figure 16**.

**Figure 16: Population Trends (2008 to 2051)**



The County’s population grew by 14.6% between 2016 (305,681) and 2021 (350,222). This population increase is higher when compared to Canada (5.2%) and Ontario (5.8%). Eight of the Towns/Townships had over 10% growth which included New Tecumseth (28.3%), Bradford West Gwillimbury (21.4%), Wasaga Beach (20.3%), Innisfil (18.5%), Springwater (13.9%), Collingwood (13.8%), Penetanguishene

(12.4%) and Tay (10.5%). This population increase and distribution, including future populations will impact the service delivery of waste collection (e.g., curbside collection schedules and volumes).

## 4.2 Waste Projections

For the purposes of this Strategy review, a five-year planning period was used to support and rationalize the direction of future waste management programs and services. The steps involved understanding historical and current trends in waste generation, and reviewing available waste composition data and population projection data. This data was used to estimate the future total quantities of waste to be managed over the planning period.

### 4.2.1 Forecasted Waste Quantities

To estimate future waste quantities to be managed over the five-year Strategy review, 2022 was selected as the base year. It was assumed that the waste composition would remain unchanged over the five-year Strategy review. However, the participation (e.g., use of diversion programs, but not necessarily putting materials in the right stream) and capture rates (e.g., putting materials in the right stream) will change over time due to new programs and policies, increased promotion and education and product stewardship initiatives. It is challenging to predict the future waste stream based on how quickly and continuously waste continues to change. Some examples of how waste is currently changing include the following:

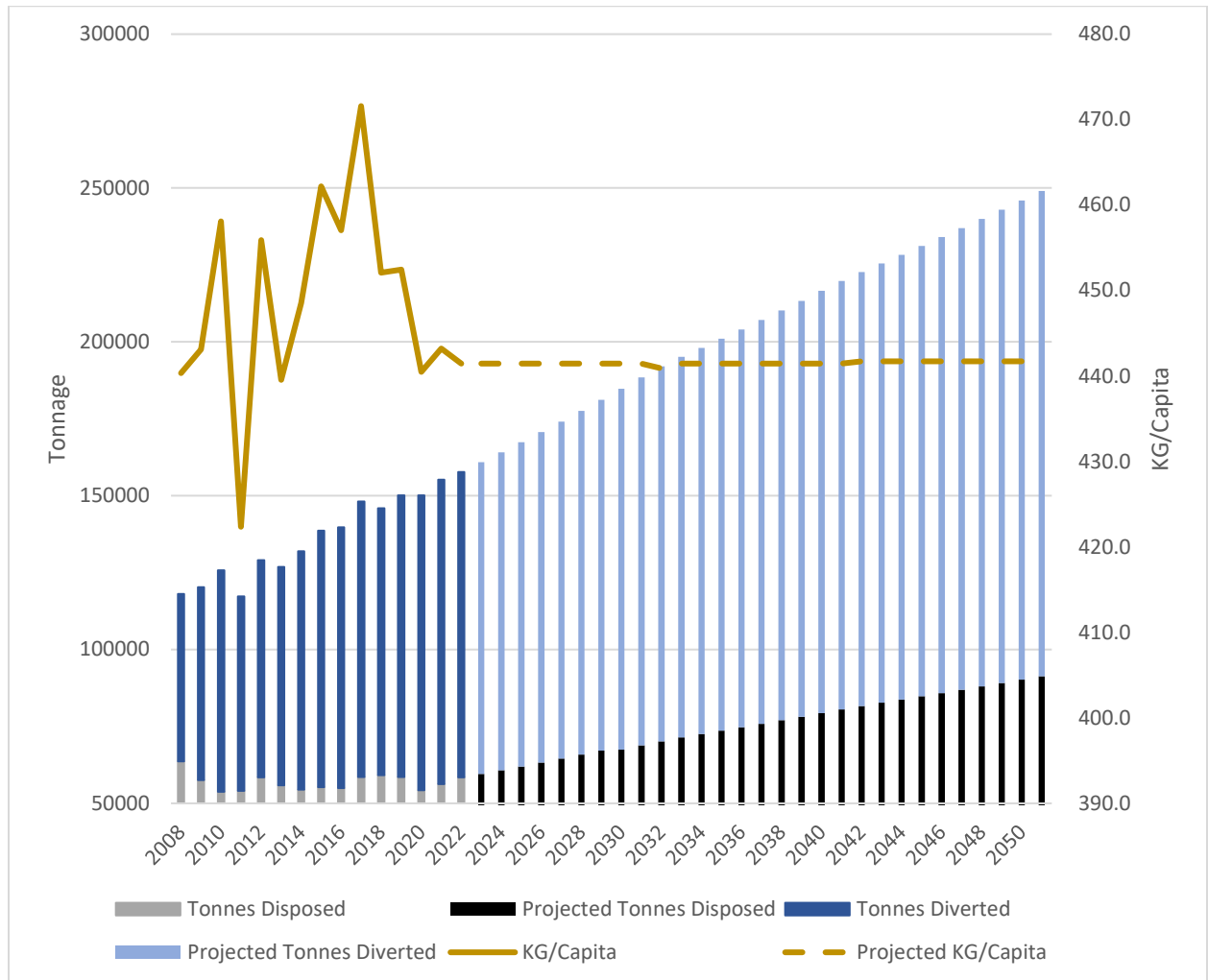
- Product packaging is getting lighter to reduce transportation costs;
- More people prefer to get their news from online sources, which is decreasing the generation of newspapers;
- Increased online shopping (in general as well as throughout COVID-19) generates more household cardboard;
- More people are working from home as a result of the pandemic; therefore, generating more residential waste;
- Increased availability of single-use items (SUIs) (e.g., coffee capsules, stand-up pouches, takeout containers); and
- There is an impact due to COVID-19 where seasonal residents may stay longer into the fall and/or snowbirds may not leave.

### 4.2.2 Waste Generation

The waste generation rate estimates the total quantity of materials generated or produced by a per capita basis. Waste generation rates are affected by various factors and can be closely linked with economic conditions. In general, the more prosperous the population is, the more money they will spend, and in turn, the more waste they will generate. Using the County's 2022 tonnage and population data from **Figure 16**, waste generation rates were calculated for both curbside collection and waste management facilities for 2022 population estimates (**Figure 17**). Based on waste generation data provided by the County, the 2022 per capita waste generation rate was 0.44 tonnes, which is less than

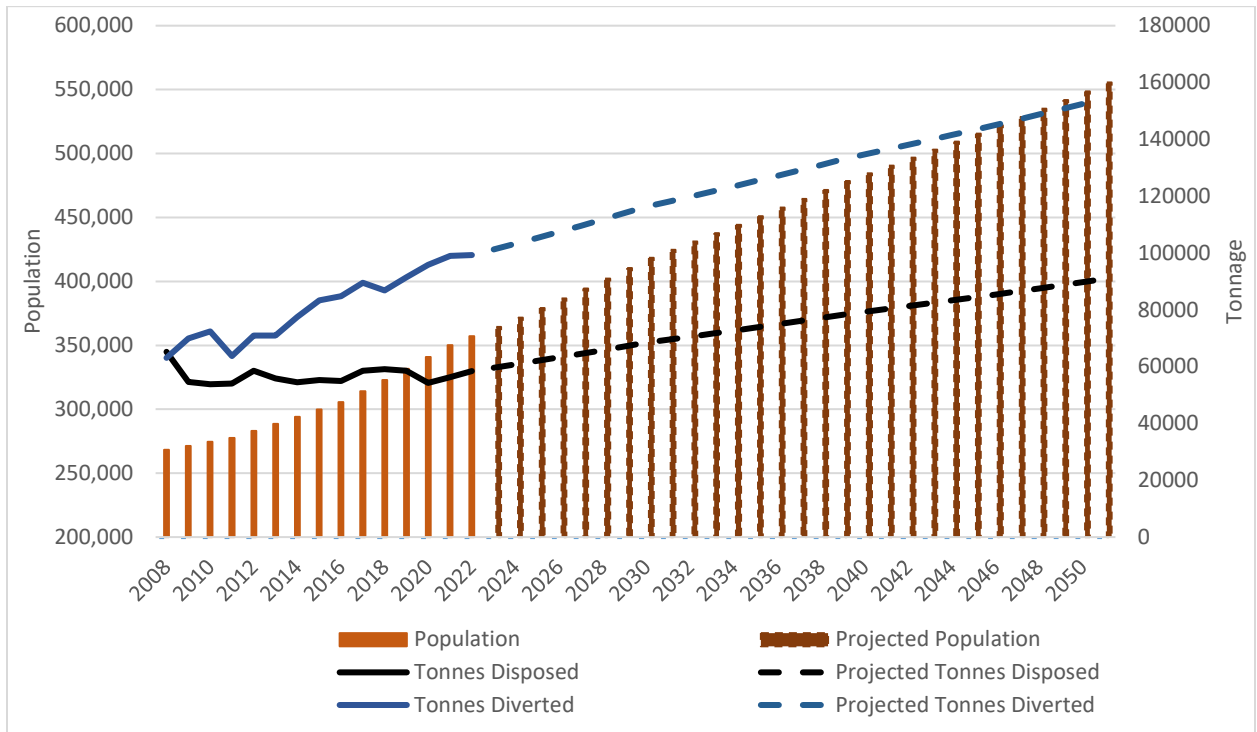
the 2015 per capita waste generation rate (0.46 tonnes) from the previous Strategy update. However, between 2016 and 2019 the average per capita waste generation rate was 0.46 tonnes. The impacts of COVID-19 may have reduced the per capita waste generation rate for 2022 (total tonnes of waste managed as per **Table 3**) and may not be reflective of future expectations. The figure also illustrates anticipated garbage disposal and diversion trends (should no changes be made to existing programs).

**Figure 17: Waste Generation Rates (kg/Capita) (2008 to 2051)**



**Figure 17** illustrates population growth and anticipated garbage disposal and diversion trends (should no changes be made to existing programs). By 2051, it is estimated that the County will generate 245,000 tonnes of waste; with approximately 154,000 tonnes diverted and 91,000 tonnes disposed as garbage (based on the 2022 average diversion rate).

**Figure 18: Population Trends and Waste Generation (tonnes) (2008 to 2051)**



## 5.0

## Options Development

The County's previous strategy objectives, current state of the waste management system, current and upcoming regulations, waste projections and discussions with the County were factored into the development of the options. Best practices from other jurisdictions that had considered or implemented similar options and a triple bottom line evaluation was completed on each option.

## 5.1

### Potential Options

With an understanding of the County's current position and priorities, and in consultation with the County, 18 options were carried forward for further review which are outlined in **Table 7**.

**Table 7: List of Potential Options**

Category	Option
Waste Collections	1. Conduct an assessment on special curbside waste collection
	2. Evaluate recycling collection under the new IPR framework
	3. Review impacted ineligible properties with the transition to IPR
	4. Assess guidelines for waste collection from multi-family developments
	5. Evaluate the use of bag tags
	6. Investigate the potential to service the IC&I sector with organics collection
Organics Participation	7. Assess mandatory participation in the organics program
	8. Increased P&E campaign and research for organics
Waste Facilities	9. Update the Waste Management By-law to include the change to carts and bi-weekly collection
	10. Continued development of ERRC
	11. Review continued operations of household hazardous waste depots
	12. Assess the current rate schedule at County waste facilities
	13. Assess extending hours at County waste facilities
	14. Assess relocating Matchedash Waste Facility to the Medonte Closed Landfill
P&E	15. Explore purchasing property in South Simcoe for future waste management facilities
	16. Enhance P&E programs
Other	17. Collaborate with other County departments in the development of environmental sustainability initiatives
	18. Develop a disaster debris management plan

## 5.2

### Criteria for Options Evaluation

A list of evaluation criteria and their indicators to evaluate each of the options using a triple bottom line approach which considers economic feasibility, social impact and financial impact was provided to the

County. The County selected two indicators for each of the three criteria to evaluate each of the options as well as the rank for each of the rankings where 1 is the least desirable and 3 is the most desirable.

**Table 8** outlines the criteria, the indicators used to evaluate the options (e.g., annual operating costs, level of effort) and the evaluation rankings applied to each option.

**Table 8: Evaluation Criteria**

Criteria	Indicator	Rank
Economic Feasibility	Annual operating and capital costs	1: Greater than \$1,000,000
		2: \$100,000 to \$1,000,000
		3: Under \$100,000
	Level of risk	1: Very High (e.g., poor results, environmental impacts, liability)
2: Moderate (e.g., risk can be mitigated)		
3: Very Low (e.g., good results, good for environment, limited liability)		
Social Impacts	Ease of access and participation	1: Low ability to access and low participation (e.g., specific event dates, various locations, low frequency)
		2: Moderate ability to be accessed and some participation (e.g., access through waste facilities or curbside with moderate frequency)
		3: Easy to access and greatest potential for participation (e.g., curbside access and high frequency) OR does not require public participation
	Level of effort	1: High (e.g., more than 5 years)
		2: Moderate (e.g., some additional resources needed, 3-5 years)
		3: Low or easy (e.g., can be done with existing resources)
Environmental Impacts	Climate change impacts (e.g., estimated GHG emissions)	1: Little to no reduction in GHG emissions
		2: Moderate reduction in GHG emissions
		3: Significant reductions in GHG emissions
	Potential diversion from landfill disposal	1: 2% diversion or less, difficult to measure
		2: 2 to 5% diversion
3: 5% diversion or more		

### 5.3

## Options Evaluations

A list of 24 draft options were provided to the County for review which were based on Dillon's review of the County's previous strategy objectives, current state of the waste management system, current and upcoming regulations, waste projections and discussions with the County. Upon review, 11 of the options were refined and/or merged together with other similar options and approved by the County. An additional seven options were selected by the County for evaluation; in total 18 options were selected by the County. Estimated timelines for implementation of each option were also selected by the County. For each option the rationale for inclusion, proven examples, general areas of focus and major assumptions was completed and documented by Dillon in **Table 9** to **Table 26**.

Many of the options that have been developed are multi-phased and require an initial assessment and/or design to plan how the option could be implemented to meet the County's needs and may also require public consultation. For evaluation purposes of multi-phase options that require an initial assessment, the first step (assessment) and the second step (implementation) has been evaluated for each these options.

**Table 9: Option 1: Conduct an Assessment on Special Curbside Waste Collections**

<b>Description</b>	<p>Explore the feasibility of adding materials to collect curbside, increasing the collection frequency of special items and the collection frequency of LYW. In addition to weekly organics and bi-weekly garbage and recycling collection, the County also offers the following curbside collection services:</p> <ul style="list-style-type: none"> <li>● Annual Christmas tree collection;</li> <li>● Seasonal LYW collection;</li> <li>● Year round call-in scheduled bulky item collection;</li> <li>● Annual clothing and electronics collection; and</li> <li>● Annual battery collection.</li> </ul> <p>The assessment and actions as a result of the assessment are both included in the evaluation of this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>● The collection frequency required would be dependent upon the material, resources required to execute collection, processing, end of life management plans and budget;</li> <li>● Permit for transportation of dangerous goods may be required, depending on the quantity;</li> <li>● Any programs for IPR designated materials would need to consider requirements of PROs;</li> <li>● Any additional LYW summertime collection(s) should include an analysis of the overall environmental impact based on the additional collection vehicles (emissions) versus potential diversion materials that could otherwise be addressed through actions such as grass cycling; and</li> <li>● Any changes would require an extensive P&amp;E campaign to inform residents of changes.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>● 2023 to 2025</li> </ul>
<b>Rationale</b>	<p>Based on the Satisfaction Survey conducted in 2022, 14% of residents would like increased services through the diversion of additional materials via curbside collection and receiving more frequent LYW collection.</p>
<b>Case Studies</b>	<p><b>Guelph, ON:</b> The City of Guelph examined waste collection efficiencies in 2017 as part of a business services review of their integrated waste management system. The purpose of the review was to compare the current waste management system to comparator municipal services and determine if the service delivery approach exceeded or was in line with comparator municipalities or if changes needed to be made. Recommendations included increased service levels for LYW collection during the growing season which the City has implemented.</p> <p><b>Surrey, BC:</b> In 2019, the City of Surrey increased their curbside bulky waste collection program from four items per year to six items per year in order to reduce illegal dumping of large items. All households that receive curbside collection from the City of Surrey are entitled to set out six bulky items for disposal throughout the course of the calendar year.</p>

Residents can call the City of Surrey Waste Collection Line to schedule a bulky item pick up or book online. The City has also completed a pilot for multi-family bulky collection. Initial response to this program was positive; however, space requirements for multi-family bulky waste collection are challenging due to limited space available. Following the pilot, the City permitted buildings receiving City recycling/organics to have four bulky items collected per year, per unit. Curbside collection programs are all run through their contracted waste hauler. Residents are charged a solid waste utility fee (\$316/year) for waste collection which includes bulky waste collection. The increased number of items collected curbside has led to reduced illegal dumping of materials; however, it is not known if it is directly related to this change as other bulky waste collection programs have also been implemented in recent years.

**Greater Sudbury, ON:** The City of Greater Sudbury partners with Toxic Taxi, a collection service in which household hazardous waste is collected curbside by arranging an appointment. If a household has hazardous waste they cannot deliver to the HHW depot themselves, they are advised to call the Toxic Taxi to book an appointment. Materials are collected from residents with no fee since residents cannot be charged for the collection of this material in Ontario. It is not known if the City supports the fees associated with transportation of this program above the Ontario regulations.

Evaluation Results	Evaluated Item	Economic Feasibility	Social Impact	Environmental Impact
(1 is least preferred and 3 is most preferred)	Review of Contract	A) Capital & Operating Costs: 3 - The costs of the assessment are anticipated to be under \$10,000.  B) Level of Risk: 3 - There is minimal risk anticipated to be involved in this assessment.	A) Ease of Access & Participation: 3 - It is anticipated that there will be minimal public participation required as it is an initial assessment.  B) Level of Effort: 3 - The assessment is anticipated to have a low level of effort and not require external resources and support.	A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.  B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.
	Actions as a Result of Review	A) Capital & Operating Costs: 1 - It is anticipated that changes to the collection contract to collect additional materials could cost \$1,000,000 to \$2,000,000, per year, depending on the amount of materials and frequency of collection.	A) Ease of Access & Participation: 3 - It is anticipated that this will be easy to access for residents as it will be an enhancement of curbside services and could potentially reduce traffic at waste facilities.  B) Level of Effort: 2 - It is anticipated that	A) Climate Change Impacts: 1 - There will be little to no reduction in GHG as it is expected that increased collection will increase GHG emissions; however, the associated waste diversion may offset GHG emission impacts.



	<p>B) Level of Risk: 2 - There is some risk anticipated to be involved as the County would be reducing materials from disposal; however, there is a risk that there is low participation in any new programs and not all items may be divertible (e.g., bulky). There is also concern that more material may be accepted than what the County has capacity to accept and/or process.</p>	<p>external resources will be required (e.g., collection contractor) and additional P&amp;E resources.</p>	<p>B) Potential for Waste Diversion: 1 -The collection of additional materials are likely to result in additional waste diversion which could be 2 to 5%. The amount will be dependent on the materials that are being collected and participation rates.</p>
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**Table 10: Option 2: Evaluate Recycling Collection under the New IPR Framework**

<b>Description</b>	<p>In May 2022, CMO, which is the PRO leading the Blue Box transition collection process through the Blue Box Regulation, issued a Master Services Agreement (MSA) and launched a survey for municipalities in Ontario indicate their level of interest in continuing recycling collection between the County's IPR transition dates (January 1, 2024) and December 31, 2025. If the County is interested and can negotiate the MSA with the PRO, the County would continue to provide recycling collection for the two-year period. If the County is not interested, the County would no longer provide recycling collection to eligible properties as of January 1, 2024 and the PRO's would manage and collect recycling.</p> <p>In response to this survey, County Council has authorized staff to negotiate with CMO in regards to the MSA to continue collecting Blue Box materials throughout the County. CMO would financially compensate the County for the collection of designated materials for designated sources. Due to this, an assessment needs to be conducted to support CMO negotiation efforts. This option is a priority as needs to be completed by the County. It is noted that as the Blue Box transition nears, there could be additional changes to how transition will occur. Therefore, the County needs to continue to stay updated on IPR transition and potential impacts. Information presented regarding transition is current up until January 31, 2023.</p> <p>The assessment and actions as a result of the assessment are both included in the evaluation of this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>The County has conditionally opted in to continue collection of Blue Box materials. Should agreement be reached with CMO, the County would receive additional compensation from CMO until December 31, 2025, with additional service potentially until the end of the existing Miller collection contract.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>2023</li> </ul>
<b>Rationale</b>	<p>Reviewing the terms of the draft MSA from CMO is essential in order to evaluate the benefits and risks to the County in continued provision of recycling collection.</p> <p><b>Other Considerations:</b></p> <ul style="list-style-type: none"> <li>Consider if the County wishes to provide transfer services for pre-processing at a transfer station post transition as this may allow the County's contractor Miller less off route time going to an alternative transfer point;</li> <li>Existing recycling assets may be used by producers as part of the Blue Box Program so it is important to determine appropriate facility lease rates and equipment rental/sales; and</li> <li>Waste by-laws will need to be amended to reflect regulation changes.</li> </ul>
<b>Case Studies</b>	<p><b>Kingston, ON:</b> The City of Kingston authorized staff to respond to the CMO survey to express interest in continuing to provide collection services from July 2025 (transition date) until December 2025. By 'opting in' to continue collection services, the City's contract with Environmental 360 Solutions for collection from east and west areas and in-house collection to central areas would remain the same. CMO proposed a funding model where a contract extension would be paid at 2020 rates with Consumer Price Index (CPI) and administration costs of 5%. In 2020, the City had a contract with Waste Connections at \$0.75 per stop, their new contract with E360 increased to \$1.67 per stop; therefore, the</p>

	<p>City would incur an estimated cost of \$585,000 with this model. CMO has stated they are willing to negotiate with the City.</p> <p><b>Hamilton, ON:</b> The City of Hamilton has opted out of providing continued recycling collection services. Their main concerns were as follows:</p> <ul style="list-style-type: none"> <li>• The proposed reimbursement, based on the municipal payment calculation model is estimated to cost the City a minimum of \$3.03 million;</li> <li>• The risk of potentially having to haul materials up to 60 minutes away would cost the City an estimated \$860,000;</li> <li>• The City would likely incur financial penalties due to the contamination threshold determined by CMO; however, the estimated costs are currently unknown;</li> <li>• The allocated P&amp;E reimbursement would cost the City an estimated \$110,000; and</li> <li>• The City does not have adequate staff resourcing to generate the monthly reports required by CMO.</li> </ul>			
<p><b>Evaluation Results</b></p> <p>(1 is least preferred and 3 is most preferred)</p>	<p><b>Evaluated Item</b></p>	<p><b>Economic Feasibility</b></p>	<p><b>Social Impact</b></p>	<p><b>Environmental Impact</b></p>
	<p>Assessment</p>	<p>A) Capital &amp; Operating Costs: 3 - The costs of the assessment are anticipated to be under \$100,000.</p> <p>B) Level of Risk: 3 - There is minimal risk anticipated to be involved in this assessment.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that there will be minimal public participation required as it is an initial assessment.</p> <p>B) Level of Effort: 3 - The assessment is anticipated to have a moderate level of effort for a short period of time and will not require external resources and support.</p>	<p>A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>
	<p>Actions as a Result of Assessment</p>	<p>A) Capital &amp; Operating Costs: 3 - Actions as a result of the assessment, are not expected to cost the County any additional capital or operating budget than are currently being spent (with exception to increases as a result of inflation). The County could see a reduction in costs associated with recycling based</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that this will be easy to access for residents as there would be no service changes.</p> <p>B) Level of Effort: 3 - Continuing with collection of Blue Box materials is anticipated to have a low level of effort and not require external</p>	<p>A) Climate Change Impacts: 1 - The option is anticipated to have no impact on GHG emissions</p> <p>B) Potential for Waste Diversion: 1 - Program changes are anticipated to have little to no impact on waste diversion as they should not impact curbside collection regardless if</p>

		<p>on CMO’s reimbursement per household.</p> <p>B) Level of Risk: 3 - There is some risk that if the County continues with Blue Box recycling programs that the costs received from CMO will not cover the County’s costs; however, the County will maintain more control over the program with residents.</p>	<p>resources and support noting that there are monthly reporting requirements to CMO. However, if the County discontinues the collection of Blue Box materials it is anticipated that existing efforts would decrease as CMO would manage Blue Box collection.</p>	<p>CMO or the County is responsible for collection. However, it may be difficult for the County to track diversion if the County does not continue collecting.</p>
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**Table 11: Option 3: Review Impacted Ineligible Properties with the Transition to IPR**

<b>Description</b>	<p>On April 28, 2020, staff reported to Council (CCW 2020-158) to seek direction on the County's preferred transition date. The report also informed the Committee of the Whole about O. Reg. 391/21 (Regulation) and its definition of eligible sources. As a result of producers' obligation to collect and manage recycling from eligible sources alone, municipalities are required to assess the impact of ineligible sources no longer receiving services (for the County, this includes to provision of service to IC&amp;I locations which are not considered residential). This can involve understanding the overall impact to the integrated waste management system resulting from the lack of services, relative to the cost of providing services to ineligible sources. The decision can also be informed by other factors such as:</p> <ul style="list-style-type: none"> <li>• Environmental values, sustainability objectives, municipal priorities and a desire to maintain the current services level;</li> <li>• Concerns around costs of litter collection around recreation centres, libraries and municipal facilities, as well as in parks and public spaces;</li> <li>• Operational considerations, existing contracts and the division of responsibilities across divisions (e.g., transportation services, parks, solid waste); and</li> <li>• Other considerations, such as logistical impact in downtown cores with ineligible IC&amp;I, including retail on the main floor with eligible residential above the retail businesses.</li> </ul> <p>Due to this, an assessment will need to be completed to review the County's ineligible properties that will be impacted due to the transition to IPR. The assessment and actions as a result of the assessment are included in the evaluation of this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>• Ineligible sources may prefer to receive waste services from the County or PROs rather than managing their own recycling. If the County does not provide recycling services to ineligible sources they may not recycle.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>• 2024 to 2025</li> </ul>
<b>Rationale</b>	<p>Pursuant to O. Reg. 391/21, producers must collect and manage Blue Box materials from eligible sources. The Regulation identifies eligible sources as single-family households, multi-family buildings, schools, non-profit long-term care facilities, and some public spaces. Producers are not responsible for collecting and managing recycling from ineligible sources under the Regulation. These include IC&amp;I customers and municipal facilities (e.g., community centres, libraries, civic centres, places of worship and shelters).</p> <p>*The Regulation establishes a transition period (July 1, 2023 to January 1, 2026) and as of January 1, 2026, producers' responsibility for the collection of management from multi-family buildings and public spaces will increase. During the transition years, producers must service multi-family buildings that were previously serviced by the municipality; after January 1, 2026 producers must service all multi-family buildings. Similarly, the number of public spaces collection points (e.g., parks, transit stops) required will increase as of January 1, 2026.</p> <p><b><u>Review of Potential Risks</u></b>  <b>Risks resulting from ineligible properties no longer receiving services:</b></p> <ul style="list-style-type: none"> <li>• An increase in recyclables ending up in the garbage or other waste streams;</li> <li>• An increase in confusion among residents, as they will not know why recycling containers are no longer available at ineligible sources (the public will not be familiar with the distinction);</li> <li>• An increase in confusion among staff responsible for waste set out at ineligible sources; and</li> </ul>

	<ul style="list-style-type: none"> <li>It is estimated that the County allows service to approximately 5,300 IC&amp;I ineligible units.</li> </ul> <p><b>Risks to servicing ineligible properties:</b></p> <ul style="list-style-type: none"> <li>Cost of servicing ineligible properties, including both collection and processing costs; and</li> <li>Cost of communicating with ineligible properties as collection times may change and as ineligible sources may have a different collection schedule than eligible sources.</li> </ul>			
<b>Case Studies</b>	<p><b>London, ON:</b> The City of London services approximately 60 to 700 ineligible customers comprised of small businesses on residential recycling routes. As these locations are not designated by the Regulation, the City will not receive financial compensation for the continued provision of recycling collection services to these ineligible sources. The management of these materials is part of negotiations with PROs to determine whether the economies of scale can be leveraged as part of any negotiations. City staff have gathered contractual and in-house service data to support the negotiations which includes contract details, financial impacts, staff impacts, service level details, budget implications, information and technology impacts and integration with and/or impact to other service areas. The City is one of the first municipalities to transition on July 1, 2023.</p> <p><b>Toronto, ON:</b> The City of Toronto services approximately 7,600 ineligible customers comprised of small commercial locations, City facilities, charities, institutions and religious organizations and manages approximately 12,000 tonnes of recycling and 3,500 tonnes of old corrugated cardboard from these locations. Ineligible sources are currently co-collected with eligible sources such as multi-residential buildings or single family homes that are collected along the same collection routes. Similar to London, the City is discussing PROs collecting from non-eligible sources during negotiations. Staff have been directed to report back to Council in early 2023 to discuss the results of negotiations. The City is one of the first municipalities to transition on July 1, 2023.</p>			
<p><b>Evaluation Results</b></p> <p>(1 is least preferred and 3 is most preferred)</p>	<b>Evaluated Item</b>	<b>Economic Feasibility</b>	<b>Social Impact</b>	<b>Environmental Impact</b>
	Assessment	<p>A) Capital &amp; Operating Costs: 3 - The costs of the assessment are anticipated to be under \$100,000.</p> <p>B) Level of Risk: 3 - There is minimal risk anticipated to be involved in this assessment.</p>	<p>A) Ease of Access &amp; Participation: 2 - It is anticipated that there will be minimal public participation required as it is an initial assessment. However, it is anticipated that the County may obtain buy-in from ineligible properties when developing options.</p> <p>B) Level of Effort: 3 - The assessment is anticipated to have a low level of effort and not require external resources and support.</p>	<p>A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>
	Actions as a Result of Assessment	A) Capital & Operating Costs: 2 - Actions as a result of the	A) Ease of Access & Participation: 2 - It is anticipated that if	A) Climate Change Impacts: 1 - There will be little to no reduction

		<p>assessment, could increase the County's operating budget depending on what is implemented (e.g., separate collection contract for ineligible properties). It is anticipated that the operating costs would be under \$500,000, annually.</p> <p>B) Level of Risk: 2 - There is some risk anticipated to be involved as depending on if the County determines to service ineligible properties as recyclables could end up in the garbage stream and/or there could be confusion among ineligible sources on collection days if separate from eligible source collection.</p>	<p>curbside Blue Box collection continues for ineligible properties that this will be easy to access and/or participate; however, if Blue Box collection is no longer offered by the County to ineligible properties Blue Box collection alternatives (e.g., private collection) may not be easily accessible for participation.</p> <p>B) Level of Effort: 2 - Actions may require additional resources (e.g., collection contractor).</p>	<p>in GHG as it is expected that if separate collection occurs for ineligible properties that there will be increased GHG emissions.</p> <p>B) Potential for Waste Diversion: 2 - Actions as a result of the assessment could impact waste diversion in the County but as they are ineligible properties it is noted that there would be no impact on the County's RPRA diversion rate.</p>
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**Table 12: Option 4: Assess Guidelines for Waste Collection from Multi-Family Developments**

<b>Description</b>	<p>Complete an assessment on the current and proposed multi-family developments within the County from a waste collection / servicing perspective. Multi-family developments can face challenges in implementing waste diversion programs due to space limitations (i.e., space to store recycling stream is not prioritized by developers) and access to waste diversion programs in the building (i.e., no green cart program). Challenges to accessing waste diversion programs leads to contamination of recycling streams and low participation by occupants. Development design guidelines for waste management in multi-family developments provide design requirements intended to improve access to waste diversion programs and provide sufficient space in buildings for waste collection programs.</p> <p>The County has a Multi-Residential &amp; Private Road Waste Collection Policy effective 2017, which describes the requirements for curbside waste collection services for multi-family developments. This policy outlines several requirements including application submission requirements for waste collection services such as engineering drawings and turn path analysis, the requirement for continuous collection without the need for waste collection vehicles to reverse on a private road, road maintenance and to maintain access to waste (ownership of waste) by waste collection vehicles. Compared to the guidelines for multi-family waste collection of other similar municipalities in Ontario, there are many design elements the County's policy does not include. For example, the County's policy does not include guidelines for different types of multi-family developments such as mixed-use buildings, stacked townhouses and commercial spaces within developments. The County's policy also lacks details regarding the design of waste storage areas and chute systems in multi-family developments as well as designing recycling waste streams to be as convenient for occupants as the garbage stream.</p> <p>The assessment and actions as a result of the assessment are included in the evaluation of this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>● The current Waste Management By-Law will need to be updated with the changes;</li> <li>● The population in the County will continue to grow; therefore, the number of multi-family developments will also continue to increase; and</li> <li>● The County will continue to provide waste collection services to multi-family developments that can be serviced curbside and maintain ownership of waste (e.g., garbage and organics).</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>● 2024 to 2025</li> </ul>
<b>Rationale</b>	<p>The assessment can assist the County with developing updated design standards for developers and determining if the County will continue to service multi-family developments.</p>
<b>Case Studies</b>	<p><b>Continuous Improvement Fund (CIF):</b> The CIF developed guidelines for implementing best practices in municipal multi-family recycling collection programs. Best practices for municipalities include:</p> <ul style="list-style-type: none"> <li>● Developing a database of all multi-family developments;</li> <li>● Benchmark performance to set targets and monitor improvement;</li> <li>● Provide sufficient storage space for the recycling stream; and</li> <li>● Provide promotion and education about the waste management programs.</li> </ul> <p>The following municipalities have recently or are in the process of updating their requirements/ guidelines, with consideration of some of the best practices, for waste collection services for multi-family developments:</p>



- Peel, ON:** The Region of Peel developed their Waste Collection Design Standards Manual in 2020. This manual outlines the requirement of convenience (i.e., the set out of recycling must be as convenient as the set out of garbage) and accessibility (for occupants to access waste management system). Compared to the County’s policy, the manual provides more detail of safety and access for waste collection vehicles including minimum overhead clearance height and minimum distance for head on approach to the point of collection. The manual also describes how to calculate the number and size of containers required for waste collection based on the size of the multi-family development, the minimum area required to store waste and outlines requirements for waste chutes and other equipment including waste compactors.
- Halton, ON:** Halton Region is currently updating their development design guidelines for waste collection services. Halton’s population is growing and larger and more complex multi-family developments are being proposed by developers. Halton has observed that developers are often resistant to maximizing space and providing access for waste collection as it reduces the amount of selling space they can utilize, which can compromise the safety and accessibility for waste collection services. Halton wants to improve the new guidelines by focusing on increasing safety, accessibility and space requirements for both waste collection vehicle access and occupant access.

Evaluation Results	Evaluated Item	Economic Feasibility	Social Impact	Environmental Impact
<p>(1 is least preferred and 3 is most preferred)</p>	Assessment	<p>A) Capital &amp; Operating Costs: 3 - The costs of the assessment are anticipated to be under \$100,000.</p> <p>B) Level of Risk: 3 - There is minimal risk anticipated to be involved in this assessment.</p>	<p>A) Ease of Access &amp; Participation: 3 - The assessment is anticipated to have little to no participation from the public.</p> <p>B) Level of Effort: 3 - The assessment is anticipated to have a low level of effort and not require external resources and support.</p>	<p>A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>
	Actions as a Result of Assessment	<p>A) Capital &amp; Operating Costs: 3 - Actions as a result of the assessment, could increase the County’s operating budget depending on what is implemented (e.g., updates to the County’s design standards for multi-family developments). It is anticipated that the costs to update the design standards would be under \$100,000.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that this will be easy to access and/or participate; actions as a result of the assessment may increase the accessibility of waste diversion programs in multi-family developments.</p> <p>B) Level of Effort: 2 - Actions may require additional resources (e.g., collection contractor).</p>	<p>A) Climate Change Impacts: 1 - It is anticipated that there will be little to no reduction in GHG emissions. Emissions from waste collection vehicles may be offset by the potential increase in waste diversion.</p> <p>B) Potential for Waste Diversion: 2 – Changes to multi-family development guidelines could impact waste diversion as it is</p>

		<p>B) Level of Risk: 3 - There is no risk anticipated to be involved as developing the guidelines could lower the County's potential risks with existing multi-family guidelines.</p>		<p>anticipated that the guidelines would permit more accessibility and space for waste diversion programs in multi-family developments. Diversion could increase between 2 to 5% noting that the amount will be dependent on the programs that are implemented and resident participation.</p>
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**Table 13: Option 5: Evaluate the use of Bag Tags**

<b>Description</b>	<p>Evaluate the quantity of additional garbage bags used and identify properties which regularly place extra garbage curbside in order to determine an acceptable and appropriate limit for additional bags. This would also review the possibility of increasing bag tag costs or other specifications for the use of bag tags</p> <p>The assessment of the quantity of additional garbage bags placed curbside and actions as a result of making changes to bag tags are included in the evaluation of this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>• Bag limits need to be below or at the average garbage set out rate in order to encourage diversion and work most effectively; the current system allowing five bags bi-weekly in addition to garbage carts is above the average garbage set out rate; and</li> <li>• In 2022 the County sold 55,000 bag tags (average use per serviced unit = 0.4 tags/year) under the new cart based collection with the additional capacity versus 2020 pre cart based collection with 190,000 bag tags sold (average use per serviced unit = 1.4 tags/year).</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>• 2024</li> </ul>
<b>Rationale</b>	<p>Placing limitations on additional garbage bags can encourage diversion and may decrease the quantity of garbage going to landfill.</p>
<b>Case Studies</b>	<p><b>Halton, ON:</b> Halton Region allows a three bag limit for their bi-weekly garbage program where bag tags are sold for \$2 per tag. Prior to implementation of the three bag limit, approximately 85% of households set out three or less bags. Currently, 95% to 97% set out three or less bags on a bi-weekly basis. Some residents do use the largest bags or cans that they are permitted to use; however, there are several households that only place out one bag per collection period. At the beginning of implementation, Halton observed a spike in Blue Box and green cart tonnages which could have been contamination; however, this jump reduced and normalized as residents realized that they could maintain three bags or less per collection period.</p> <p><b>Hamilton, ON:</b> The City of Hamilton implements a weekly one bag limit for garbage. Bag tags are mailed out to residents free of charge once a year, with a maximum of 14 bags per resident. The success of this program has been tied to effective P&amp;E, customer service and enforcement at the curb.</p> <p><b>Waterloo, ON:</b> In April of 2022 the Region of Waterloo approved reducing the household garbage limit from four bags/cans to three bag/cans (noting that garbage is collected bi-weekly). Residents could continue to purchase tags for any extra bags of waste. The phase in of this occurred through a three-phased approach:</p> <ul style="list-style-type: none"> <li>• Phase 1: April to September, 2022: A comprehensive P&amp;E campaign was launched to encourage residents to reduce waste. By-law 17-008 was updated and bag tag vendors were notified of the upcoming change.</li> <li>• Phase 2: October to December 2022: The limit came into effect during Waste Reduction Week. Staff and collection contractors monitored set out and provided educational materials to households over the limit.</li> <li>• Phase 3: January 2023: Starting January 1, 2023 the limit began to be enforced. Collection staff place "Oops" stickers on untagged garbage set out over the limit and leave the bag at the curbside.</li> </ul> <p>Garbage tags are \$2 each and are sold in sheets of five for \$10. Tags do not have an expiry date and there is no refund for unused tags. Tags can be purchased online or at 50 local vendors. In 2021, approximately 8,000 sheets (40,000 tags) were sold throughout the Region.</p>

	<p>Regional staff are currently evaluating their 2022 bag tag purchases. It is noted that there are approximately 100 households throughout the Region that are approved in the Medical Exemptions program and receive bag tags from the Region due to unavoidable medical waste. The Region has a diaper/incontinence products program which permits free drop-off at Regional waste facilities. Approximately 40 metric tonnes are dropped off each year. The Region also continues to have double garbage days four times per year to assist households that may generate extra garbage during holidays and other events such as spring cleaning.</p>			
<p><b>Evaluation Results</b>  (1 is least preferred and 3 is most preferred)</p>	<p><b>Evaluated Item</b></p>	<p><b>Economic Feasibility</b></p>	<p><b>Social Impact</b></p>	<p><b>Environmental Impact</b></p>
<p>Assessment</p>	<p>A) Capital &amp; Operating Costs: 3 - The costs of the assessment are anticipated to be under \$10,000.  B) Level of Risk: 3 - There is minimal risk anticipated to be involved in this assessment.</p>	<p>A) Ease of Access &amp; Participation: 3 - The assessment is anticipated to have little to no participation from the public.  B) Level of Effort: 3 - The assessment is anticipated to have a low level of effort; however, it may require external resources and support to identify properties (e.g., collection contractor).</p>	<p>A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.  B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>	
<p>Actions as a Result of Assessment</p>	<p>A) Capital &amp; Operating Costs: 3 - The reduction of the garbage bag limit could reduce the County's operating budget (processing and disposal costs) if the reduction also reduces the amount of waste that is set out at the curb. It is anticipated that the reduction would be less than \$100,000.  B) Level of Risk: 2 - There is the potential risk that residents that frequently set out five tagged bags per week may not be supportive of the reduction. Additionally, there could be an increase in illegal dumping.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that this will be easy to access and/or participate; however, residents that frequently set out five tagged bags per week may not be supportive of the reduction.  B) Level of Effort: 3 - This is anticipated to have a low level of effort; however, it will require existing external resources to enforce the limits (e.g., collection contractor).</p>	<p>A) Climate Change Impacts: 1 - It is anticipated that there will be little to no reduction in GHG emissions.  B) Potential for Waste Diversion: 1 - Actions as a result of the assessment could impact waste diversion (&lt;1%) due to the potential decrease in garbage.</p>	

**Table 14: Option 6: Investigate the Potential to Service the IC&I Sector with Organics Collection**

<b>Description</b>	<p>Complete an assessment to determine the level of interest from the IC&amp;I sector not currently using the County’s organics program to use an organics curbside collection program.</p> <p>The assessment and actions as a result of the assessment are included in the evaluation of this option.</p>			
<b>Considerations</b>	<ul style="list-style-type: none"> <li>• The County would need to conduct consultation and engagement with the IC&amp;I sector;</li> <li>• An amendment to the Waste Management By-law may be required;</li> <li>• Capital costs may be incurred depending on the number of new collection containers required;</li> <li>• The amount of organics the IC&amp;I sector currently generates is unknown; and</li> <li>• It is unknown if the County would make the organics curbside collection services mandatory or voluntary.</li> </ul>			
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>• 2024 to 2025</li> </ul>			
<b>Rationale</b>	<p>Based on the 2022 Satisfaction Survey, 40% of serviced businesses participate in the County’s organics program. Ontario’s Food and Organic Waste Framework indicates a potential ban on landfilling organics.</p>			
<b>Case Studies</b>	<p><b>Guelph, ON:</b> The City of Guelph currently offers organics collection services to some small commercial businesses, places of worship, non-profit organizations and daycares if they generate small quantities and are located along a residential route. Guelph also provides services to some businesses located in strip malls or will collect organics carts from industrial establishment, offices and cafeterias that have been historically serviced. As part of the 2021 Solid Waste Management Master Plan update, Guelph developed eligibility criteria related to servicing IC&amp;I customers and potential funding models. Overall, participants of the Solid Waste Management Master Plan engagement process were supportive of the options for servicing IC&amp;I establishments.</p> <p><b>Niagara, ON:</b> Niagara Region provides weekly green cart collection services for mixed-use premises that that have one or more IC&amp;I uses and also have a residential use. There is no limit on the number of carts for the mixed-use premises that are inside the designated business area; however, there is a limit of eight green carts (or equivalent number of green carts) for mixed-use premises outside of the designated business area.</p>			
<p><b>Evaluation Results</b></p> <p>(1 is least preferred and 3 is most preferred)</p>	<b>Evaluated Item</b>	<b>Economic Feasibility</b>	<b>Social Impact</b>	<b>Environmental Impact</b>
	Assessment	<p>A) Capital &amp; Operating Costs: 3 - The costs of the assessment are anticipated to be under \$100,000.</p> <p>B) Level of Risk: 3 - There is minimal risk anticipated to be involved in this assessment.</p>	<p>A) Ease of Access &amp; Participation: 3 - The assessment is anticipated to involve high levels of participation and increase access to diversion programs. Competing concerns with increased contamination from the IC&amp;I sector will have to be considered.</p>	<p>A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>

			<p>B) Level of Effort: 2 - The assessment may require external P&amp;E or consulting services and support.</p>	
	<p>Actions as a Result of Assessment</p>	<p>A) Capital &amp; Operating Costs: 2 - Servicing the IC&amp;I sector is anticipated to increase the County’s operating budget (collection and processing costs). It is anticipated that the increase could be \$100,000 to \$500,000 per year; however, this is dependent on the number of properties, tonnage and contamination level of organics.</p> <p>B) Level of Risk: 2 - There is the potential risk that the costs to service the IC&amp;I sector are too high for the amount of organics that are collected.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that this will be easy to access and/or participate.</p> <p>B) Level of Effort: 3 - This is anticipated to have a low level of effort; however, it will require existing external resources (e.g., collection contractor).</p>	<p>A) Climate Change Impacts: 1 - It is anticipated that there will be little to no reduction in GHG emissions. Emissions from waste collection vehicles may be offset by the potential increase in waste diversion.</p> <p>B) Potential for Waste Diversion: 1 - Actions as a result of the assessment could impact waste diversion (&lt;1%) due to the potential decrease in garbage but as they are ineligible properties there would be no impact on the County’s RPRA diversion rate.</p>

**Table 15: Option 7: Assess Mandatory Participation in the Organics Program**

<b>Description</b>	<p>Increase the participation rate in the current organics curbside collection program by updating the Waste Management By-Law to require mandatory participation in the organics program. This could involve requiring residents to place out their organics carts in order to receive garbage collection. Enforcement of the by-law may include not servicing households who do not have their organics cart at the curb.</p> <p>Updating the Waste Management By-Law is included in the evaluation of this option; time for enforcement as a result of the changes are not included.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>Residents can put their organics cart out every week (i.e., there is enough organic material be collected to justify weekly collection); and</li> <li>Collection schedules for organics and garbage align on the same day so that both can be observed at the curb.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>2025</li> </ul>
<b>Rationale</b>	<p>While the County's capture rate for organics has improved in recent years (currently at 67% based on the 2022 waste audits) with bi-weekly garbage and switching to carts, there continues to be significant divertible organics in the garbage stream (approximately 30% of the weight of the average garbage bag is still acceptable organics). Some households (nearly 2% of units) have refused receipt of an organics cart and are therefore not using the organics program. The option would be implemented in conjunction with Option 8.</p>
<b>Case Studies</b>	<p>Enforcement mechanisms that require residents to place out their organics carts in order to receive garbage collection were not found through a jurisdictional scan to be in place in any North American or European jurisdictions; therefore, there are no direct case studies for comparison. However, the following case studies have been provided for informational purposes to support the County's consideration of this option.</p> <p><b>Ottawa, ON:</b> In 2021, the City of Ottawa explored the effectiveness of requiring residents to participate in their organics program to receive full waste management services. The analysis reviewed the number of multi-family buildings which have garbage collected and are also registered for the organics program. The results indicated that 46% of multi-family buildings participated in both garbage and organics programs. Based on two audits conducted on multi-family properties with an organics program in place there was a capture rate of 23% of all organics generated and the waste diversion rate was 17%. One of the key factors in multi-family buildings joining the organics program is the building owner/managers preference, not resident preference. The City concluded that it would be too difficult to incorporate this into a waste by-law and that education would be a better option.</p> <p><b>Coquitlam, BC:</b> The City of Coquitlam has increased their enforcement of their Solid Waste Bylaw over the past few years. This has included the completion of several curbside audits and enforcement blitzes of household garbage container set out times. The City's waste by-law includes specific set out requirements to limit the amount of wildlife interactions due to being located in close proximity to a large wildlife population. Residents are not allowed to set out their garbage or organic carts before 5 am on the day of collection. Compliance blitzes to enforce these set out specifications are completed for all waste collection routes in the City. The amount of recorded non-compliant households decreased by 64% from 2018 to 2020 and decreased by an additional 40% from 2019 to 2020. Blitzes are used as an initial warning tactic for residents, whereas second-time offenders (i.e., putting out carts before 5 am) are fined.</p>

Evaluation Results	Evaluated Item	Economic Feasibility	Social Impact	Environmental Impact
<p>(1 is least preferred and 3 is most preferred)</p>	Assessment	<p>A) Capital &amp; Operating Costs: 3 - The costs of the update are anticipated to be under \$100,000.</p> <p>B) Level of Risk: 3 - It is anticipated that there is minimal risk involved in this update.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that there will be little to no public participation required in this update; however, it is anticipated that the County will communicate with residents any changes as a results of the update.</p> <p>B) Level of Effort: 3 - The update is anticipated to be completed with existing staffing resources.</p>	<p>A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>
	Actions as a Result of Assessment	<p>A) Capital &amp; Operating Costs: 3 - The costs for implementation are anticipated to be under \$100,000 as it is expected to be completed through the waste collection contract.</p> <p>B) Level of Risk: 3 - It is anticipated that there is limited risk involved in this update.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated for most residents, this will not impact their ease and/or access to participate in the County’s curbside programs; however, for residents that do not participate in the curbside organics program and/or do not put out their organics on a consistent basis, it will be inconvenient to not receive garbage collection.</p> <p>B) Level of Effort: 2 - It is anticipated that this will require effort to enforce at the curb and to encourage all residents to participate</p>	<p>A) Climate Change Impacts: 3 – The option is anticipated to reduce GHG emissions as more organics will be diverted from landfilling.</p> <p>B) Potential for Waste Diversion: 3 - It is anticipated that this option will result in additional waste diversion; however, it is difficult to measure the percent increase in diversion. If the organics capture rate were to increase by 10% as a result of this option this would increase County waste diversion by approximately 2.5%. If enforced and residents participate, this could increase diversion by over 5%.</p>



**Table 16: Option 8: Increased P&E Campaign and Research for Organics**

<b>Description</b>	<p>Increase P&amp;E to increase resident participation in organics programs. A campaign may include promotion which would support Option 7: Update the Waste Management By-law to Include Enforcement Mechanisms for Participation in Mandatory Organics Program. It could also include incentives for using kitchen catchers and/or paper bags.</p> <p>Conduct research on other successful municipal P&amp;E campaigns to identify the best practices to promote organic program participation.</p> <p>Development, research and the implementation of a campaign is included in the evaluation of this option.</p>
<b>Assumptions</b>	<ul style="list-style-type: none"> <li>• The public has access to computers, tablets, smart phones and similar technology;</li> <li>• A variety of tools and strategies will be utilized to reach the diverse demographic; and</li> <li>• It is unknown whether the County would use its communication team or hire an external consultant and/or communications specialist.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>• 2024 to 2026</li> </ul>
<b>Rationale</b>	<p>This option could be implemented in conjunction to Option 7: Update the Waste Management By-law to Include Enforcement Mechanisms for Participation in Mandatory Organics Program. However, this option focuses on increasing overall P&amp;E efforts to divert more organics from the garbage stream.</p> <p>Based on the 2022 Satisfaction Survey, 14% of permanent residents indicate they only occasionally or never participate in the organics program. 33% of seasonal residents said they never or occasionally divert organics. 40% of businesses participate in the organics program.</p>
<b>Case Studies</b>	<p><b>Love Food, Hate Waste:</b> Love Food Hate Waste (LFHW) campaigns engage Canadians to think about how households generate food waste and how by making different decisions when it comes to buying, storing and preparing meals, they can reduce food waste. The LFHW campaign originally started by the Waste and Resources Action Program in the United Kingdom in 2007. It is a proven behaviour change campaign that, in its first five years, helped cut avoidable food waste by 21%. The National Zero Waste Council (NZWC) launched the LFHW Canada campaign in 2018 as a key deliverable of its strategy to reduce food waste across Canada. Reducing food waste is a method of diverting organics from the landfill. At campaign launch, NZWC had several partners including Metro Vancouver, the Capital Regional District and the Cities of Toronto, Vancouver and Victoria. These municipal partners provide educational information to the public on their websites including how to prevent food waste with commonly wasted foods, the value of kitchen scraps for compost and information with respect to organics landfill bans. The LFHW campaign uses multiple platforms for its messaging (e.g., website, social media, in-store promotions, bus shelters, etc.). Materials in Canada have been developed in both English and French.</p> <p><b>Hamilton, ON:</b> In 2017, the City of Hamilton launched the "Green Your Routine" campaign to raise awareness about their green cart program and increase household participation. This involved the launch of a mobile phone app called "MyWaste," for residents to easily access waste management information. The campaign included advertisements and truck wrapping, demonstrating the availability of an app to help with waste sorting. In 2018, the campaign distributed a waste management guide to all curbside residential homes, and included a Green Your Routine pledge for residents to take to instill responsible green cart sorting habits. The City's website currently provides tips on how to effectively use the green cart, keep it clean and how to store it.</p>

**Guelph, ON:** In 2011, the City of Guelph began construction of a new composting plant to process organic waste and also introduced waste carts and automated waste collection vehicles to make the collection process more efficient. To communicate these changes, the City underwent a P&E campaign called "Give Waste a New Life." The campaign was characterized by a butterfly logo made out of two different waste streams that are collected and reprocessed (recyclables and organics). The campaign involved creating maps, brochures, user guides, posters, local newspaper advertisements, radio commercials and transit ads and an educational video. The P&E campaign was considered successful and the City had 99% of residents using the new carts on the first scheduled collection day. In 2012, the City had an overall diversion rate of 68%, surpassing 400 other Ontario municipalities. The campaign itself won four communications awards.

Evaluation	Economic Feasibility	Social Impact	Environmental Impact
(1 is least preferred and 3 is most preferred)	<p>A) Capital &amp; Operating Costs: 3 - The costs of the option are anticipated to be between \$100,000 and \$200,000.</p> <p>B) Level of Risk: 3 - It is anticipated that there is minimal risk involved in this option.</p>	<p>A) Ease of Access &amp; Participation: 3 - The development and implementation of a communications campaign is anticipated to have high levels of public participation.</p> <p>B) Level of Effort: 2 - The development and implementation of a communications campaign is anticipated to be completed with internal resources and external P&amp;E services and support.</p>	<p>A) Climate Change Impacts: 1 - The development and implementation of a communications campaign is anticipated to reduce some GHG emissions as more organics will be diverted from landfilling.</p> <p>B) Potential for Waste Diversion: 1 - It is anticipated that this option will result in waste diversion; however, it is difficult to measure the percent increase in diversion.</p>

**Table 17: Option 9: Update the Waste Management By-Law to Include the Change to Carts and Bi-Weekly Collection**

<b>Description</b>	Update the Waste Management By-law to include the change to carts and bi-weekly collection.  Updating the Waste Management By-Law is included in the evaluation of this option; time for enforcement as a result of the changes are not included.		
<b>Assumptions</b>	<ul style="list-style-type: none"> <li>• Garbage and recycling collection occur bi-weekly; and</li> <li>• By-law only needs updating.</li> </ul>		
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>• 2023</li> </ul>		
<b>Considerations</b>	The current by-law is out of date since the County's change to carts and bi-weekly garbage collection.		
<b>Case Studies</b>	<p><b>Owen Sound, ON:</b> Owen Sound updated its waste management by-laws to reflect current waste procedures of roll-out carts and bi-weekly pickup of waste. The by-laws use language such as 'containers', 'roll-out carts', and 'every other week' in amendments that occurred in 2010. These keywords help to clarify the pickup schedule as every other week and what is considered a cart or bin.</p> <p><b>Peel, ON.</b> The Region of Peel updated its waste collection by-laws in 2014 to reflect current bi-weekly waste pickups. The waste collections by-law uses definitions such as 'automated collection method', 'bi-weekly', 'bi-weekly cart standard', 'cart', 'garbage cart', 'organics cart' and more keywords. Similar to Owen Sound, the Region of Peel used keywords to update the contents of the by-laws to reflect the current method of collection. By-laws support increased diversion of waste by limiting the number of collection days and number of carts to be set out. Examples of this include "Subject to subsection 3.1 (d), no owner/occupier shall set out more than a combination of one organics cart and one garbage cart alternating every other week with one organics cart and one recycling cart per residential unit per scheduled collection day."</p>		
<b>Evaluation</b>  (1 is least preferred and 3 is most preferred)	<b>Economic Feasibility</b>	<b>Social Impact</b>	<b>Environmental Impact</b>
	<p>A) Capital &amp; Operating Costs: 3 - The costs of the update are anticipated to be under \$50,000.</p> <p>B) Level of Risk: 3 - It is anticipated that there is minimal risk involved in this update.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that there will be little to no public participation required in this update; however, it is anticipated that the County will communicate with residents any changes as a results of the update.</p> <p>B) Level of Effort: 3 - The update is anticipated to be completed with existing staffing resources.</p>	<p>A) Climate Change Impacts: 1 - The update is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The update is anticipated to have little to no impact on waste diversion.</p>

**Table 18: Option 10: Continued Development of ERRC**

<b>Description</b>	<p>Since 2012 the County has been working on the ERRC which will house the OPF, MMF and areas for public education. The project spent several years going through the land use planning approval process and in January 2022 was approved to move forward with the project. As the County continues with this project the processing technology to be utilized in the OPF, size of the OPF and MMF, design of the OPF and MMF, site preparation and construction will need to be completed.</p> <p>The completion of an assessment and actions as a result of the assessment are included in the evaluation of this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>Waste streams and composition will change after the transition to IPR.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>2023 to 2027</li> </ul>
<b>Rationale</b>	<p>The planning for the ERRC is continuing. In order to develop the site the next steps are to decide on the technology for the OPF and finalize the size of the MMF.</p>
<b>Case Studies</b>	<p><b>Ottawa, ON:</b> The City of Ottawa is developing a 30-year Solid Waste Master Plan. A component of the Solid Waste Master Plan involved evaluating technology options for processing organics. Seven types of organics processing technologies were evaluated; aerobic composting, anaerobic digestion, mechanical/chemical processing, biological processing, co-digestion of sewage and organics, in-sink disposal units and animal feed production. Ottawa is still considering the technology options and has not finalized their decision. The following is an overview of each processing technology type reviewed:</p> <ul style="list-style-type: none"> <li><b>Aerobic composting:</b> Breakdown of organics in the presence of oxygen to produce compost. Estimated costs for Ottawa to implement aerobic composting depending on the method (i.e., aerated static pile, in-vessel composting) could range from \$210 to \$665 per tonne in capital costs and \$25 to \$110 per tonne in annual operating costs.</li> <li><b>Anaerobic digestion:</b> Breakdown of organics without oxygen present to produce biogas and solids/digestate (for compost or soil amendment). It is estimated that an anaerobic digestion facility for Ottawa would cost between \$480 to \$1,120 per tonne in capital costs and \$60 to \$140 per tonne in annual operating costs.</li> <li><b>Mechanical/chemical processing:</b> Mechanical breakdown and chemical hydrolysis of organic material including organics and biosolids.</li> <li><b>Biological processing:</b> Breakdown of organics using insects such as worms with variable costs.</li> <li><b>Co-digestion of sewage and organics:</b> Anaerobic digestion process where the feedstock is a combination of organics and municipal sewage sludge. Estimated capital costs can range from \$5 million to \$80 million.</li> <li><b>In-sink disposal units:</b> Shred food waste in the sink which then enters the sewer system.</li> <li><b>Animal feed production:</b> Processing of food waste into animal feed. Estimated capital costs are approximately \$13 million and operating costs are approximately \$102/tonne.</li> </ul> <p><b>Durham Region and other Ontario Municipalities:</b> O. Reg. 391/21 will shift responsibility for managing Blue Box materials from municipalities to producers. Several municipalities in Ontario with MRFs are considering options for the future use of their MRFs after transition to IPR. Once municipalities are no longer required to manage residential Blue Box materials, they may consider options to convert their MRFs to facilities that transfer recyclables from</p>

	<p>ineligible properties (i.e., properties not included under Regulation 391/21). The Regional Municipality of Durham as part of their Long Term Waste Management Plan (2022 to 2040) will evaluate building and equipment options for their MRF located in Whitby, Ontario to determine the best use of the facility after IPR transition. To determine the size of a facility to manage waste quantities and materials that could change with IPR, several considerations are involved including:</p> <ul style="list-style-type: none"> <li>• Types of waste streams that processors would accept from the municipality in the future;</li> <li>• Processors preference for single stream or dual stream;</li> <li>• Loose, baled or compacted recyclables; and</li> <li>• The volume of waste the municipality is expected to manage after the transition to IPR (considering uncertainty of future waste composition).</li> </ul>			
<p><b>Evaluation Results</b></p> <p>(1 is least preferred and 3 is most preferred)</p>	<p><b>Evaluated Item</b></p>	<p><b>Economic Feasibility</b></p>	<p><b>Social Impact</b></p>	<p><b>Environmental Impact</b></p>
	<p>Assessment</p>	<p>A) Capital &amp; Operating Costs: 2 - The costs of the assessment are anticipated to be between \$100,000 and \$1,000,000.</p> <p>B) Level of Risk: 3 - There is minimal risk anticipated to be involved in this assessment.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that there will be little to no public participation required in this assessment.</p> <p>B) Level of Effort: 2 - The assessment is anticipated to require additional resources (e.g., legal and consultant).</p>	<p>A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>
	<p>Actions as a Result of Assessment</p>	<p>A) Capital &amp; Operating Costs: 1 - It is anticipated that if the development of the ERRC continues and a processing technology is selected for the OPF to move forward that the costs to design and construct the facility will be over \$10,000,000. The design and construction of a MMF could also cost several million. Annual processing costs for the OPF and operating costs for the MMF are anticipated to be between \$1 to \$5 million for each facility and could increase if diversion increases. However, the facilities</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that there will be little to no public participation at either the OPF or MMF as they will only accept waste from collection vehicles. However, it is anticipated that the public will continue to be updated on the option's progress through regular updates to Council.</p> <p>B) Level of Effort: 1 - This is anticipated to have a high level of effort that will require external resources (e.g., legal, consultants, contractors and operators).</p>	<p>A) Climate Change Impacts: 3 - It is anticipated that there will be a moderate reduction in GHG emissions. By increasing diversion and managing resources locally there will be a reduction in travel related to waste disposal.</p> <p>B) Potential for Waste Diversion: 3 - It is not anticipated for the OPF and MMF to increase waste diversion as the curbside collection programs current exist for organics. However, there could be a slight increase (&lt;1%) based on local communication and media attention of</p>

		<p>could also reduce existing contracted transfer costs.</p> <p>B) Level of Risk: 2 - The level of risk for this option is anticipated to be medium due to the high costs and number of components that are involved; however, the County would be in control of where material is going. The County is anticipated to have reliable operational costs when instituted and there is revenue potential from renewable natural gas and an end product.</p>		<p>the new facilities, opportunities to expand locations that are participating and/or material could be received from more facilities.</p>
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**Table 19: Option 11: Review Continued Operation of Household Hazardous Waste Depots**

<b>Description</b>	<p>Through an assessment, evaluate the risks and costs to continue to operate HHW depots since the program has transitioned to IPR as a result of the hazardous and special products (HSP) Regulation. PROs are now responsible for the collection and associated costs of all products designated under the HSP regulation. A list of materials which are currently accepted at HHW depots in Simcoe are listed below and have been categorized as 'designated' or 'non-designated'.</p> <p><b>Designated materials accepted at HHW Depots (service provided):</b></p> <ul style="list-style-type: none"> <li>● Paints and stains;</li> <li>● Oil, transmission and antifreeze;</li> <li>● Oil filters and containers;</li> <li>● Solvents and household cleaners;</li> <li>● Mercury thermostats;</li> <li>● Pesticides, fertilizers;</li> <li>● Refillable propane tanks;</li> <li>● Fluorescent bulbs and tubes; and</li> <li>● Batteries.</li> </ul> <p><b>Non-designated materials accepted at HHW Depots:</b></p> <ul style="list-style-type: none"> <li>● Needles and syringes;</li> <li>● Pool chemicals;</li> <li>● Gasoline; and</li> <li>● Fire extinguishers.</li> </ul> <p>The completion of an assessment and actions as a result of the assessment are included in the evaluation of this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>● County staff have not made a decision on how to approach the HSP Regulation; and</li> <li>● All materials listed on the County website as 'accepted' at the HHW Depots in Simcoe are accurate.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>● 2023</li> </ul>
<b>Rationale</b>	<p>As of October 2021, in Ontario, all HSP producers are accountable and financially responsible for requirements set out in the Ontario HSP Regulation under the Resource Recovery and Circular Economy Act 2016. The former MHSW (municipal hazardous and special waste) Hazardous Waste Information Network (HWIN) program is replaced by the new HSP Regulation.</p> <p>Not all HSP type materials are covered by the Regulation. It will be important for the County to identify which HSP materials are and are not covered under the Regulation, and to identify which HSP materials are currently accepted at the County's HHW depots. The County is responsible for any HSP materials they accept at their HHW depots, even if those materials are not covered under current Ontario HSP Regulations and associated IPR programs. For HSP materials not covered in the Regulation (i.e., "non-designated" HSP materials), municipalities, and not the HSP producers, will be responsible for covering collection and hazardous disposal costs of the non-designated HSP materials they accept at their HHW depots. Producers are only responsible for designated HSP materials. It is noted that the amount of money offered by the producers does not cover the County's costs to provide this service and if the producers are now fully responsible for providing the service the County may consider</p>

	<p>allowing for the producers to do so rather than accepting these materials at County sites. However, by discontinuing HHW depots at County sites, this may reduce recovery of these materials which could increase the volume of these HSP materials in the remaining waste stream.</p>			
<p><b>Case Studies</b></p>	<p>Municipalities are not required by the Regulation to provide the collection sites or the services for the designated HSP products in the Regulations after October 2021. The regulation requires HSP producers to establish and operate as many HSP collection sites which were operational as of September 2021. Many Ontario municipalities received partial funding in the past from Industry Funding Organization (IFO), i.e., the former Stewardship Ontario HWIN Orange Drop MHSW program, for the collection of their residential household hazardous wastes. It is expected that individual HSP producers and their organizations will request new service agreements with municipalities that opt to continue providing collection of residential HSP materials on behalf of HSP producers. Note that municipalities are not required to provide this service for HSP producers.</p> <p><b>Based on Kingston's Council proceedings, these are potential options for the County's HHW depots:</b></p> <ul style="list-style-type: none"> <li>● <b>Operate a HHW Depot in partnership with established HSP PROs (e.g., Product Care Association) with newly negotiated compensation agreements:</b> Council may consider funding the collection and disposal of the non-designated materials accepted in the municipality's HHW program and consider funding the portion of designated material that is not fully funded. This option (with Council funding non-designated material management) would increase the service convenience for residents as it would make the HHW depots a 'one stop shop'. The risk of this option depends on the types and quantities of non-designated HSP materials accepted at their HHW depot. An extensive list of accepted HSP materials may be costly for the County. Another risk to the County is that PROs may cease funding in the future, for various reasons, and the full financial burden would fall onto the County to continue the collection program.</li> <li>● <b>Operate a HHW Depot to ONLY collect and dispose non-designated materials:</b> This approach may create confusion for residents as they would need to go to more than one location to properly dispose/recycle HSP type materials. This may result in a decrease in the proper disposal of some HSP materials resulting in hazardous materials being disposed of in landfill. Similar to the first option, the risk to the County is that depending on the type and quantity of materials accepted, this may be a costly endeavour due to the collection and hazardous disposal costs.</li> <li>● <b>No longer operate a HHW Depot:</b> HSP producers are fully responsible and non-designated HSP materials are not regulated. Increased amounts of non-designated materials may begin entering the landfill and may create environmental hazardous impact. However, there would be no direct financial cost or risk to the County with respect to a HHW service for this option, except for the indirect potential landfill impacts.</li> </ul> <p><b>Ontario Municipalities:</b> Other Ontario municipalities are also exploring options on how to manage HHW depots moving forward. This includes the Counties of Leeds and Grenville who are currently in the process of conducting a study on their options.</p>			

<b>Evaluation Results</b>	<b>Evaluated Item</b>	<b>Economic Feasibility</b>	<b>Social Impact</b>	<b>Environmental Impact</b>
(1 is least preferred and	Assessment	A) Capital & Operating Costs: 3 - The costs of the assessment are	A) Ease of Access & Participation: 3 - It is anticipated that there will be little to no public	A) Climate Change Impacts: 1 - The assessment is anticipated to have no



<p>3 is most preferred)</p>		<p>anticipated to be under \$10,000.</p> <p>B) Level of Risk: 3 - The assessment is anticipated to have little to no risk.</p>	<p>participation required in this assessment; however, it is anticipated that the County may consult with the public on the results of the assessment to obtain public buy-in.</p> <p>B) Level of Effort: 3 - The assessment is anticipated to be completed with existing staffing resources.</p>	<p>impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>
	<p>Actions as a Result of Assessment</p>	<p>A) Capital &amp; Operating Costs: 3 - If the County no longer operates a HHW depot there may be some costs for discontinuing the service and/or for collecting materials that are improperly disposed of at the waste facilities; however, costs are anticipated to be under \$10,000.</p> <p>B) Level of Risk: 3 - If the County no longer operates a HHW depot there could be residents that continue to bring materials to the waste facilities; however, the risk is low. Additionally, there is the potential risk that the public may not be supportive of the County no longer servicing the HHW depots.</p>	<p>A) Ease of Access &amp; Participation: 1 – It is anticipated that residents that frequently use the County’s waste facilities to dispose of HHW may not be supportive of the County no longer servicing the HHW depots depending on how and where HSP materials will be collected by the PROs.</p> <p>B) Level of Effort: 3 - It is anticipated that if the County no longer operates a HHW depot that this will decrease the County’s existing efforts.</p>	<p>A) Climate Change Impacts: 3 - No longer servicing the HHW depots is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little impact on waste diversion; however, depending on how and where HSP materials will be collected by the PROs, the County could observe an increase of HSP materials in the waste stream.</p>

**Table 20: Option 12: Assess the Current Rate Schedule at County Waste Facilities**

<b>Description</b>	<p>Assess the total cost for services associated with waste disposal and processing of divertible material. Propose new rate schedule to Council for approval.</p> <p>The completion of an assessment and actions as a result of the assessment are included in the evaluation of this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>● Processing costs for divertible materials may increase with new contracts;</li> <li>● The costs to export waste will likely increase;</li> <li>● The quantity of garbage to be exported will increase as landfill capacity decreases; and</li> <li>● The options available to divert waste materials will improve in the future.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>● 2026 to 2027</li> </ul>
<b>Rationale</b>	<p>The County is estimated to reach landfill capacity to be full by 2027 with the potential for increased costs to export garbage. New contracts may result in increased processing costs for divertible material.</p>
<b>Case Studies</b>	<p><b>Comparison to Ontario Municipalities:</b> The County's 2020 residential Blue Box recyclable processing cost and waste facility rate schedule fees reported to RPRA were compared with ten other Ontario municipalities; five within the same municipal group number (RPRA Municipal Group #2: Urban Regional) and two neighbouring municipalities, City of Barrie and City of Orillia.</p> <p>The County's reported Blue Box recyclable processing costs per tonne (\$194/tonne) was higher than the average of the municipalities in Municipal Group 2 (\$158/tonne), higher than its neighbouring municipality of the City of Kawartha Lakes (\$90/tonne) and lower than the Regional Municipality of Peel (\$201/tonne) and the Regional Municipality of York (\$243/tonne). The County's reported residential depot/transfer costs per tonne (\$88/tonne) was higher than all compared municipalities except for the neighbouring municipality of the City of Kawartha Lakes (\$131/tonne). The County's reported residential disposal waste facility rate (\$155/tonne) was higher than all other compared municipalities except for the City of Ottawa at \$238/tonne (if load is over 250 kg) and the City of Orillia (\$185/tonne).</p> <p>The County's fee to divert mattresses and box springs (\$10, plus the weight at the garbage rate for mattresses) is lower than the average (for all compared municipalities) of \$16/item. Similar to most municipalities that were compared, the County does not charge residents for tires diversion. Similar to other municipalities in the same municipal group, the County does not charge for LYW diversion, with the exception of the City of Ottawa which charges \$40.50/tonne. Municipalities outside of the same municipal group and neighbouring municipalities charge for LYW diversion or charge if under a certain weight (with the exception of the City of Orillia at no charge). Of all municipalities that accept and charge for CFC appliances, the County charges \$15/item which is below the average of \$20/item. The County, similar to most other municipalities that were compared, does not charge for scrap metal or electronic waste. The Regional Municipality of Waterloo (Municipal Group #2) is the only municipality that charges for scrap metal at \$44/tonne. The County charges the lowest compared to all other analyzed municipalities for wood and C&amp;D materials (not including inert materials). The County charges \$75/tonne for wood waste and \$75/tonne for asphalt shingles and drywall. Further analysis is required for the County to determine if waste facility rate schedule fees should be adjusted.</p> <p><b>Kawartha Lakes, ON:</b> The City of Kawartha Lakes increased its minimum tipping fee for waste disposal in 2021. Kawartha Lakes has been reviewing tipping fees as part of their operations</p>

	<p>planning from 2020 to 2024. The review to determine fee changes has involved the following considerations: charging similar fees to neighbouring municipalities, setting fees that offset the cost of waste management services and improving and sustaining waste management services.</p> <p><b>Ottawa, ON:</b> The City of Ottawa is in the process of reviewing tipping fees and considering tipping fees that would provide incentive to reduce disposal of waste materials that are difficult to manage at landfill sites including bulky items.</p>			
<p><b>Evaluation Results</b></p> <p>(1 is least preferred and 3 is most preferred)</p>	<p><b>Evaluated Item</b></p>	<p><b>Economic Feasibility</b></p>	<p><b>Social Impact</b></p>	<p><b>Environmental Impact</b></p>
	<p>Assessment</p>	<p>A) Capital &amp; Operating Costs: 3 - The costs of the assessment are anticipated to be under \$10,000.</p> <p>B) Level of Risk: 3 - There is minimal risk anticipated to be involved in this assessment.</p>	<p>A) Ease of Access &amp; Participation: 3 - The assessment is anticipated to have little to no participation from the public. It is anticipated that the County will communicate any changes as a results of the assessment.</p> <p>B) Level of Effort: 3 - The assessment is anticipated to be completed with existing staffing resources.</p>	<p>A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>
	<p>Actions as a Result of Assessment</p>	<p>A) Capital &amp; Operating Costs: 3 - The change in price of the County’s rate schedule could further offset the County’s operating costs. The reduction will be dependent on how aggressive the County determines to set the rate schedule.</p> <p>B) Level of Risk: 2 - There is the potential risk that the public may not be supportive of the increase of costs and as a result there could be an increase in illegal dumping which could increase costs for clean-up.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that there will be no change to access; however, residents that frequently use the County’s waste facilities may not be supportive of the new rate schedule.</p> <p>B) Level of Effort: 3 - The implementation of the new rate schedule is anticipated to be completed with existing staffing resources.</p>	<p>A) Climate Change Impacts: 1 - It is anticipated that there will be little to no reduction in GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - A new rate schedule could impact waste diversion (&lt;1%) due to the potential decrease in garbage from residents diverting more to not pay higher disposal costs associated with garbage.</p>

**Table 21: Option 13: Assess Extending Hours at County Waste Facilities**

<b>Description</b>	<p>Complete an assessment and report to Council with recommendations regarding extended hours at waste facilities.</p> <p>The completion of an assessment and actions as a result of the assessment are included in the evaluation of this option.</p>			
<b>Considerations</b>	<ul style="list-style-type: none"> <li>Additional operational staff will likely be required.</li> </ul>			
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>2025</li> </ul>			
<b>Rationale</b>	<p>Most common responses from dissatisfied respondents during the 2022 Satisfaction Survey and the 2019 Service Level Assessment was "long wait times" at waste facilities. Over 48% of respondents in the Service Level Assessment indicated adjusting hours of operation would improve their experience: 40% indicated until 7 pm and 20% indicated both 6 pm and 8 pm.</p>			
<b>Case Studies</b>	<p>While other municipalities may have extended their hours at waste facilities, assessments on other municipalities that had extended their hours were not found through a jurisdictional scan; therefore, there are no direct case studies for comparison. However the following case studies have been provided for informational purposes to support the County’s consideration of this option.</p> <p><b>Dryden, ON:</b> In 2019, City of Dryden staff were directed by Council to investigate options on how to extend hours at the landfill. Dryden extended the hours of the Highway #502 Landfill from Monday to Saturday, 8 am to 5 pm on a yearly basis. A new staff person was hired and split their time between working at the landfill and plowing sidewalks in winter.</p> <p><b>Kawartha Lakes, ON:</b> The City of Kawartha Lakes temporarily closed the Fenelon landfill from January 1 to April 30, 2022 in order to extend its lifespan. In order to continue to provide residents with access to landfill disposal services Kawartha Lakes extended operating hours at other City-owned landfills which included the Somerville and Lindsay Ops landfills. The Lindsay Ops landfill is Kawartha Lake’s regional hub and offers more services to divert waste than at other sites. Increasing the hours at the Lindsay Ops site provided the public with better access to programs offered at the site. Somerville's operating hours of 11 am to 4:45 pm were extended to 9 am to 5 pm on Mondays, Fridays and Saturdays; Lindsay Ops which is normally closed on Wednesdays was open from 8 am to 5 pm. Since the re-opening of Fenelon landfill, Lindsay Ops and Somerville have returned to their regular operating hours.</p>			
<p><b>Evaluation Results</b></p> <p>(1 is least preferred and 3 is most preferred)</p>	<b>Evaluated Item</b>	<b>Economic Feasibility</b>	<b>Social Impact</b>	<b>Environmental Impact</b>
	Assessment	<p>A) Capital &amp; Operating Costs: 3 - The costs of the assessment are anticipated to be under \$50,000.</p> <p>B) Level of Risk: 3 - The assessment is anticipated to have little to no risk.</p>	<p>A) Ease of Access &amp; Participation: 3 - The assessment is anticipated to have little to no participation from the public.</p> <p>B) Level of Effort: 3 - The assessment is anticipated to be completed with existing staffing resources.</p>	<p>A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>

	<p>Actions as a Result of Assessment</p>	<p>A) Capital &amp; Operating Costs: 2 - It is anticipated that there would be an increase in costs associated with staffing the waste facilities for additional hours. It is anticipated that operating costs would be approximately \$100,000 per year to increase operating hours at one facility one day per week by four hours.</p> <p>B) Level of Risk: 3 - The increase in hours is anticipated to have little to no risk.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that there could be an increase in access and participation at the County’s waste facilities that extend their hours.</p> <p>B) Level of Effort: 2 - Extending hours will require additional resources (e.g., contractor).</p>	<p>A) Climate Change Impacts: 1 - It is anticipated that there will be little to no reduction in GHG emissions. There could be an increase in the number of vehicles visiting the County’s waste facilities; however, this could be offset by the increase in diversion from materials dropped off for recycling.</p> <p>B) Potential for Waste Diversion: 1 - An increase in hours could impact waste diversion (&lt;1%) due to the potential decrease in garbage at the curb from residents accessing the waste facilities to divert more materials.</p>
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**Table 22: Option 14: Assess Relocating Matchedash Waste Facility to the Medonte Closed Landfill**

<b>Description</b>	<p>The County is considering relocating the Matchedash Residential Drop off Facility and Yard Waste Facility (Matchedash Waste Facility) to Medonte Landfill which is closed but has available space and is more accessible to residents. The current facility functions as a residential drop-off facility and not a LYW facility. The new site would host large scale composting operations. Matchedash Waste Facility acts as a drop-off centre accepting materials free of charge including gently used clothing, LYW, electronics, concrete rubble, Blue Box materials, residential organics, scrap metal and tires. Other material accepted with charges includes: brush, drywall, asphalt, wood waste and mattresses and box springs. An ECA amendment would be required for the redesign and construction of a new waste facility. The ECA amendment application will require a concept plan, design &amp; operations plan and potentially a traffic study. These activities could take up to six months to complete and the expected approval time of the ECA amendment is typically one year from the date of submission.</p> <p>The completion of an assessment and actions as a result of the assessment are included in the evaluation of this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>● The public may or may not be accepting of this relocation;</li> <li>● There is already an ECA of the closed landfill site that can be amended;</li> <li>● The closed landfill site is fenced off;</li> <li>● The equipment (e.g., scale, roll off bins) being used at the Matchedash Waste Facility location would need to be relocated; and</li> <li>● A scale and more heavy equipment would be required for composting operations. Two loaders to handle incoming waste and compost operations are anticipated to be purchased.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>● 2024 to 2025</li> </ul>
<b>Rationale</b>	<p>Most common responses in the 2019 Service Level Assessment, when respondents were dissatisfied with waste facilities, included "inconvenient location" for the Matchedash Waste Facility. Relocation could improve drive times and provide more space for diversion programs. A location at the Medonte Landfill would also help to relieve the traffic at the North Simcoe Transfer Station.</p>
<b>Case Studies</b>	<p>While other municipalities may have relocated a waste facility, assessments on other municipalities that had relocated a waste facility were not found through a jurisdictional scan; therefore, there are no direct case studies for comparison presented below. However the following case studies have been provided for informational purposes to support the County's consideration of this option regarding municipalities that are currently using a closed landfill as a transfer station or as examples of building a new facility.</p> <p><b>Wellington, ON:</b> The County of Wellington has 16 closed landfill sites, of which five are being used as Transfer Stations. All closed sites have been environmentally sealed and fully comply with MECP requirements. Solid Waste Staff inspect landfills for potential issues such as erosion and fence repair needs on a quarterly basis.</p> <p><b>Six Nations of the Grand River First Nation, ON:</b> Six Nations of the Grand River First Nation, located 20 kilometres southeast of the City of Brantford, constructed a new transfer station in 2019 at the existing landfill site. The feasibility and design phases were approximately \$400,000 and the construction of the facility was \$8.3 million.</p>

Evaluation Results	Evaluated Item	Economic Feasibility	Social Impact	Environmental Impact
<p>(1 is least preferred and 3 is most preferred)</p>	<p>Assessment</p>	<p>A) Capital &amp; Operating Costs: 3 - The costs of the assessment are anticipated to be under \$100,000.</p> <p>B) Level of Risk: 3 - The assessment is anticipated to have little to no risk</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that there will be little to no public participation required in this assessment.</p> <p>B) Level of Effort: 2 - The assessment is anticipated to require additional resources (e.g., legal and consultant).</p>	<p>A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>
	<p>Actions as a Result of Assessment</p>	<p>A) Capital &amp; Operating Costs: 1 - It is anticipated that the capital costs will be over \$15,000,000 to relocate as it requires design and construction of the new facility and deconstruction and potential relocation of equipment and infrastructure of the existing facility. Additionally, there would be capital costs associated with the LYW operations and new equipment (e.g., scale and two loaders). Annual operating costs are anticipated to be similar to existing costs with the addition of costs related to the LYW composting operations and maintaining new equipment.</p> <p>B) Level of Risk: 1 - The level of risk for this option is anticipated to be moderate due to the costs and number of components that are involved.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that the relocation could increase public access and participation to a waste disposal facility.</p> <p>B) Level of Effort: 1 - This is anticipated to have a high level of effort that will require external resources (e.g., legal, consultants, contractors and operators).</p>	<p>A) Climate Change Impacts: 1 - It is anticipated that there will be little to no reduction in GHG emissions. There could be an increase in the number of vehicles visiting the County's waste facility; however, this could be offset by the increase in diversion from materials dropped off for recycling.</p> <p>B) Potential for Waste Diversion: 1 - The relocation could impact waste diversion (&lt;1%) due to the potential decrease in garbage at the curb from residents accessing the waste facility to divert more materials.</p>



**Table 23: Option 15: Explore Purchasing Property in South Simcoe for Future Waste Management Facilities**

<b>Description</b>	<p>Complete an assessment of available properties needed for curbside waste transfer, public drop-off and yard waste facility. Following the assessment the County may determine to purchase the property and initiate the work necessary for local municipal and Ministry approvals.</p> <p>The completion of an assessment and the actions as a result of the assessment are included in the evaluation of this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>• There will continue to be a shortage of industrial land available in Ontario in the future; and</li> <li>• Obtaining ECAs and Planning Act approvals can be a lengthy process and may involve public consultation.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>• 2024 to 2027</li> </ul>
<b>Rationale</b>	<p>High growth continues in the southern communities of the County. A new waste drop-off facility will be required to accommodate future waste management needs. This may alleviate some of the challenges with the West Gwillimbury waste facility as the area continues to grow. Additionally, material would be deposited by residents closer to end markets and/or landfills in the south which would reduce transfer costs.</p>
<b>Case Studies</b>	<p><b>Siting Considerations:</b> To assess available properties and purchase a property for development of a waste management facility, several considerations apply. Property selection should consider future growth, how the facility will impact the community, accessibility, public safety and distance residents would need to travel to the site and convenience of the location. Consider properties that are located on or close to an existing waste management facility as this can reduce the complexity of the approvals process (i.e., zoning approvals and if the site has an existing ECA, an amendment is required rather than a new ECA application). Properties that can access utilities and that are connected to regularly maintained roads should be considered.</p> <p>An important consideration when selecting a property includes environmental impacts of the facility. Consider the site's potential impacts on surrounding land, water and air. When considering potential properties, identify and review the following: surrounding land uses, zoning restrictions, proximity to sensitive land uses and environmental features, satellite and aerial photographs, topographical maps and surveys. Consider future changes including population growth, traffic and materials collection, storage and transportation (i.e., IPR and changing diversion programs).</p> <p>Involve the public in the decision-making process. Public consultation helps to build project support and can result in higher buy-in of the property. Additionally, economic assessment is an important step to consider. Cost estimation including capital and operating costs and cost of planning and approvals (including ECA applications). ECA applications require the following information; site location, site plan, landscape plan, identification of nearby groundwater wells, stormwater management plan, leachate management plan, location and proximity of site neighbors, location of any sites of cultural, historical or environmental significance, odour management plan and access to the site, potential traffic effects and road restrictions.</p> <p><b>Hamilton, ON:</b> The City of Hamilton currently has three transfer stations/community recycling centres. The 2012 update for the City's Solid Waste Management Master Plan involved a recommendation to conduct a study (needs analysis and operational review) on the three sites. The study concluded that the City will need a fourth site to meet future capacity</p>



requirements. The City has been assessing potential locations for the additional transfer stations/community recycling centre; however, the City has not been able to find an appropriate location and may need to adapt their original plan to only include a community recycling centre for residents (and not use as a transfer station for curbside collected garbage). In Ontario, there is currently a shortage in the availability of industrial land. There are several factors impacting this shortage including increased property values and increased demand for housing as well as development restrictions (i.e., environmentally sensitive areas).

**Halton, ON:** The Regional Municipality of Halton started developing a Solid Waste Management Strategy in 2017 for a thirty year planning period (ending in 2030). A recommendation to the Region involved purchasing property for two additional public waste drop-off depots in the more urban areas of the Region. The drop-off depots would accept excess curbside collected and non-curbside waste from residents. Additional studies are required before the Region selects a site location(s).

<b>Evaluation Results</b>	<b>Evaluated Item</b>	<b>Economic Feasibility</b>	<b>Social Impact</b>	<b>Environmental Impact</b>
<p>(1 is least preferred and 3 is most preferred)</p>	Assessment	<p>A) Capital &amp; Operating Costs: 2 - The costs of the assessment are anticipated to be between \$100,000 and \$200,000.</p> <p>B) Level of Risk: 3 - There is minimal risk anticipated to be involved in this assessment.</p>	<p>A) Ease of Access &amp; Participation: 3 - It is anticipated that there will be public participation required in this assessment.</p> <p>B) Level of Effort: 3 - The assessment is anticipated to be completed with existing staffing resources, including the County’s Procurement, Fleet and Property Department and legal.</p>	<p>A) Climate Change Impacts: 1 - The assessment is anticipated to have no impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The assessment is anticipated to have little to no impact on waste diversion.</p>
	Actions as a Result of Assessment	<p>A) Capital &amp; Operating Costs: 1 - It is anticipated that the purchase of any property that may be appropriate for the size of a required waste facility will be over \$10,000,000. Further costs will be associated in with developing the land and obtaining approvals and completing public consultation. However, as a new property is targeted for the south end of Simcoe materials</p>	<p>A) Ease of Access &amp; Participation: 3 - it is anticipated that the development of future waste facilities could increase public access and participation to a waste disposal facility.</p> <p>B) Level of Effort: 1 - This is anticipated to have a high level of effort that will require external resources (e.g., legal, consultants).</p>	<p>A) Climate Change Impacts: 2 - It is anticipated that there will be a moderate reduction in GHG emissions. By increasing diversion and managing resources locally there will be a reduction in travel related to waste disposal.</p> <p>B) Potential for Waste Diversion: 1 - The development of a new facility could impact waste diversion (&lt;1%) due to the potential</p>

		<p>would be deposited closer to end markets or landfills which are anticipated to reduce transfer costs.</p> <p>B) Level of Risk: 1 - The level of risk for this option is anticipated to be high as the County may need to purchase a site prior to determining if they County will receive ECA and Planning Act approval for a new waste facility and/or public acceptance of the proposed site.</p>		<p>decrease in garbage at the curb from residents accessing the waste facility to divert more materials.</p>
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**Table 24: Option 16: Enhance P&E Programs**

<b>Description</b>	<p>Enhance the existing P&amp;E programs to improve waste knowledge and understanding in the County of the waste services and programs that are available to the public. The goal of the P&amp;E program is to increase participation in diversion programs and/or waste reduction.</p> <p>The development and implementation of a P&amp;E program is included in the evaluation of this option; research to inform the development is not included in this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>• Not every resident has access to a computer, smartphone and/or internet; the P&amp;E strategy for waste management programs should include a mix of in-person and virtual activities; and</li> <li>• A variety of tools and strategies will need to be utilized to reach diverse demographics.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>• 2023 to 2026</li> </ul>
<b>Rationale</b>	<p>Enhance P&amp;E as waste composition study and the 2019 Satisfaction Survey results indicate that there could be improvement in usage of County provided programs. This includes:</p> <ul style="list-style-type: none"> <li>• Cart management best practices (e.g., manoeuvring, storage, what goes in/out);</li> <li>• Enhance P&amp;E for the Learning and Living Green Program; and</li> <li>• Current programs for both curbside and facility (with an emphasis on sites accepting hazardous waste).</li> </ul>
<b>Case Studies</b>	<p><b>Kawartha Lakes, ON:</b> The City of Kawartha Lakes has an Integrated Waste Management Strategy (2020 to 2024) which outlines P&amp;E activities to utilize including: social media, recycle coach app, various methods of advertising and earth and waste reduction week activities. Providing P&amp;E to support existing waste services and programs is a key initiative in Kawartha Lakes. Recently, Kawartha Lakes conducted a Future Waste Options Study to identify the best approach to manage future residual waste and throughout this process various engagement activities such as open houses (both in person and virtual), focused stakeholder sessions, surveys and dedicated web pages were developed. Kawartha Lakes also wants to be a leader and be a positive influence for the community and has developed Corporate Waste Reduction Initiatives with key performance indicators for accountability. Corporate Waste Reduction Initiatives include additional training for staff on waste reduction, purchasing policies that promote recycling and reusable materials and improved waste practices in municipal buildings.</p> <p><b>Peel, ON:</b> The Region of Peel's website has a variety of educational resources for elementary and high school students pertaining to waste management. Educational materials include virtual tours about waste management, lesson plans, activity sheets, games, posters, guidebooks and videos. In September 2022, Peel launched a communications campaign "Get back to waste basics" for residents with messages that include checking which receptacle to sort waste and how to prepare for waste pick-up. Throughout September, residents were provided with mail brochures including waste pick-up essentials. Peel also held an online workshop and tour of the Peel Integrated Waste Management Facility for waste reduction week in October 2022.</p> <p><b>Waterloo, ON:</b> The Region of Waterloo's website provides several P&amp;E resources to increase the public's knowledge about waste management. Waterloo recently held a colouring contest for elementary school students titled "Every Piece Counts" depicting two individuals properly sorting their waste. There are Waste Representatives that are available for online "curbside chats" that can speak to several waste management topics including sorting, recycling, green bin, compost, and landfill construction. Workshops can be requested, with a minimum of 15 people in attendance. Waterloo also provides two Public Tour Days each year at the landfill,</p>

	<p>MRF and drop off centres. The tours occur with Earth Day and Waste Reduction Week and are advertised as a "free, fun family event." The tours recently restarted as they were cancelled for a few years due to COVID-19.</p> <p><b>Halton, ON:</b> Halton Region's website provides a diverse range of waste management resources. There are promotion materials including posters and stickers which can be ordered for community events and elementary and high schools. Halton also offers educational workshops for schools, businesses as well as youth, service, cultural and religious clubs and organizations. A workshop request form can be filled out on the website. Event organizers are able to request Blue Boxes and green carts for community events. There are also waste management site tours for students to see and learn about the HHW depot, yard waste composting facility and more of the regional waste diversion programs.</p>		
<p><b>Evaluation</b></p> <p>(1 is least preferred and 3 is most preferred)</p>	<p><b>Economic Feasibility</b></p> <p>A) Capital &amp; Operating Costs: 2 - The costs of the P&amp;E program are anticipated to be between \$100,000 and \$200,000.</p> <p>B) Level of Risk: 3 - There is minimal risk anticipated to be involved in this option.</p>	<p><b>Social Impact</b></p> <p>A) Ease of Access &amp; Participation: 3 - The development and implementation of a P&amp;E program is anticipated to have high levels of public participation.</p> <p>B) Level of Effort: 2 - The development and implementation of a P&amp;E program is anticipated to be completed with internal resources and external P&amp;E services and support.</p>	<p><b>Environmental Impact</b></p> <p>A) Climate Change Impacts: 1 - The development and implementation of a P&amp;E program is anticipated to reduce some GHG emissions related to waste diversion; however, it is difficult to measure.</p> <p>B) Potential for Waste Diversion: 1 - It is anticipated that this option will result in waste diversion; however, it is difficult to measure the percent increase in diversion.</p>

**Table 25: Option 17: Collaborate with Other County Departments in the Development of Environmental Sustainability Initiatives**

<b>Description</b>	<p>Support the County's Sustainable Operations Staff in establishing a list of potential initiatives the County could execute from a waste perspective. This could be supported by the County's Green team that currently meets on a regular basis to discuss initiatives.</p> <p>Quarterly meetings are included in the evaluation of this option; actions as a result of the implementing any initiatives is not evaluated as part of this option.</p>		
<b>Considerations</b>	<ul style="list-style-type: none"> <li>• The Sustainability Operations Staff have the resources necessary to develop a list of initiatives;</li> <li>• The Solid Waste Department has sufficient resources to be able to assign a new role for a pre-existing Solid Waste Staff to lead this option; and</li> <li>• It is unknown if the Sustainable Operations Staff will require external support to develop a list of initiatives to pursue.</li> </ul>		
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>• 2023 to 2027</li> </ul>		
<b>Rationale</b>	<p>The County has staff dedicated to Sustainable Operations in the Procurement, Fleet and Property Department, which have made it a priority to make operational and procurement decisions with considerations of environmental sustainability.</p>		
<b>Case Studies</b>	<p><b>York, ON:</b> York Region is in the process of completing a Waste Reduction Baseline Study for their environmental service departments. The study is based on their Smart Living plan and Corporate Sustainability plan. These sustainability plans note that if the residents/business are participating in waste reduction, the Region should as well since they are a corporation. The study takes a baseline of each environmental department and creates objectives, key activities, and performance measures to rate reduction, by tonnage or percentage. York Region is currently working on department baselines to create realistic objectives for staff. In the early stages of this study, they suggest making an inventory list of materials and waste produced by the departments to allow other departments to evaluate if they can use any of the waste material.</p> <p><b>Ottawa, ON:</b> The City of Ottawa is evaluating the development of a Corporate Waste Avoidance, Reduction, Reuse and Diversion Strategy (2022). This strategy would identify how Ottawa, as a corporation, generates waste in its operations and administration departments. This strategy will bring circular economy principles into practice for Ottawa and will require a change in staff's decisions for purchasing goods for their departments. Staff education will be required to aid staff through these practice changes to divert, reuse and reduce waste. The strategy suggests making a dedicated committee to be the main implementation of the waste reduction, avoidance and reuse options across all City operations. This will allow departments to have open communication about materials that could be reused by another department. Ottawa will need to create realistic goals based on the department waste baselines.</p>		
<b>Evaluation</b>  (1 is least preferred and	<b>Economic Feasibility</b>  A) Capital & Operating Costs: 3 - The costs of the option are	<b>Social Impact</b>  A) Ease of Access & Participation: 3 - It is anticipated that there will be little to no public	<b>Environmental Impact</b>  A) Climate Change Impacts: 1 - The option is anticipated to have no impact on GHG

<p>3 is most preferred)</p>	<p>anticipated to be under \$10,000.</p> <p>B) Level of Risk: 3 - It is anticipated that there is minimal risk involved in this option.</p>	<p>participation required in this option.</p> <p>B) Level of Effort: 3 - The option is anticipated to be completed with existing staffing resources.</p>	<p>emissions; however, actions as a result of the option could have an impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The option is anticipated to have little to no impact on waste diversion; however, actions as a result of the option could have an impact on waste diversion.</p>
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**Table 26: Option 18: Develop a Disaster Debris Management Plan**

<b>Description</b>	<p>Develop a plan for managing waste under various disaster scenarios. Preparing for a disaster such as an act of nature, terrorism/war, government mandated shut downs and/or border closures can improve response efforts and reduce threats to health, safety, the environmental costs and waste management efforts. Depending on their nature, disasters can generate large volumes and tonnages of debris, impacting emergency response and overwhelming waste collection, processing facilities and solid waste personnel. These materials may also be harmful to human and environmental health. Establishing a disaster debris management plan should be completed before a disaster. Developing these plans can be a complex challenge as it involves balancing community and environmental factors, stakeholder desires and political will.</p> <p>The completion of a plan is included in the evaluation of this option; actions as a result of the plan, such as disaster debris clean-up are not included in this option.</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>• The plan will include the development to manage debris in the event of various disasters;</li> <li>• The County understands the requirements of Emergency Management Ontario; and</li> <li>• The County has developed an emergency management program to protect the lives and property of its citizens as required by the Emergency Management and Civil Protection Act.</li> </ul>
<b>Proposed Timing</b>	<ul style="list-style-type: none"> <li>• 2025 to 2026</li> </ul>
<b>Rationale</b>	<p>Preparing for a disaster such as an act of nature, terrorism/war, government mandated shut downs and/or border closures can improve response efforts and reduce threats to health, safety, the environmental costs and waste management efforts.</p>
<b>Case Studies</b>	<p><b>Recent Events:</b> Preparing for a disaster can improve response efforts and reduce threats to health, safety, environmental costs and waste management efforts. Some of the more recent events requiring disaster debris management mitigation include tropical storm Fiona (Atlantic Canada, 2022), flooding in BC due to atmospheric rivers (2021), Ontario tornados (Barrie, 2021) and ice storms throughout Ontario (2020). These events required the management of LYW, food waste from spoiled food due to power outages, C&amp;D debris, damaged household waste and hazardous and bulky items.</p> <p><b>Metro Vancouver, BC:</b> Metro Vancouver has developed a joint Municipal Regional Disaster Debris Management Operational Plan for Metro Vancouver Region and members. This plan provides an operational framework for disaster debris management for the 23 Local Authorities within the Region. The guiding principles and tools provided in this plan allow the Local Authorities to coordinate labour, resources and communications specific to disaster debris. This plan outlines short, medium and long term recovery activities. The guiding principles for disaster debris management in the Metro Vancouver Region are:</p> <ul style="list-style-type: none"> <li>• Disaster debris processes include initial debris clearance, temporary debris collection, management of temporary waste handling facilities and final disposal;</li> <li>• Estimation of the debris volume and weight;</li> <li>• Encourage supportive legislative and regulatory provisions to enable effective disaster debris management and processing;</li> <li>• Where practical, separate disaster debris to reduce health risks and safely manage hazardous disaster debris;</li> </ul>

	<ul style="list-style-type: none"> <li>• Minimize interim and long-term impacts to the natural environment from disaster debris management operations;</li> <li>• Promote the re-use, recycling and energy recovery of disaster debris, where possible; and</li> <li>• Provide the public with clear and concise instructions regarding disaster debris management.</li> </ul> <p><b>Emergency Preparedness Canada:</b> Emergency Preparedness Canada sponsored the development of a paper regarding disaster debris management through the disaster preparedness centre at the University of British Columbia. The report aims to promote the local development of a debris management plan, as this is one of the most effective strategies to mitigate disaster impacts. The article addresses important topics, including allocation of responsibilities, policy-making, human factors, debris management, cost reduction and administrative procedures. It is intended to support developing guidelines for emergency planners, municipal engineers and others responsible for debris management. This document can be used to understand and set all appropriate parameters of a disaster debris management plan.</p>		
<p><b>Evaluation</b></p> <p>(1 is least preferred and 3 is most preferred)</p>	<p><b>Economic Feasibility</b></p> <p>A) Capital &amp; Operating Costs: 2 - The costs of the plan are anticipated to be between \$100,000 and \$200,000; however, actions as a result of the plan could have an impact on capital and operating costs.</p> <p>B) Level of Risk: 3 -The plan is anticipated to have little to no risk.</p>	<p><b>Social Impact</b></p> <p>A) Ease of Access &amp; Participation: 3 - It is anticipated that there will be little to no public participation required in this plan.</p> <p>B) Level of Effort: 2 - The plan is anticipated to require additional resources (e.g., consultant, additional County departments).</p>	<p><b>Environmental Impact</b></p> <p>A) Climate Change Impacts: 1 - The plan is anticipated to have no impact on GHG emissions; however, actions as a result of the plan could have an impact on GHG emissions.</p> <p>B) Potential for Waste Diversion: 1 - The plan is anticipated to have little to no impact on waste diversion; however, actions as a result of the plan could have an impact on waste diversion.</p>

5.3.1 Options Evaluation Summary

A summary of the options evaluation has been included in **Table 27**. As previously noted, many of the options that were developed are multi-phase and require both an initial assessment and/or design to plan how the option could be implemented. To permit comparison purposes between all options, scores for options that only contained an initial assessment were doubled so that the highest score attainable per option was 36 and the lowest score attainable per option was 12.



Table 27: Summary of Options Evaluation

Option		Economic Feasibility		Social Impacts		Environmental Impacts		Total*
		Annual Operating and Capital Costs	Level of Risk	Ease of Access and Participation	Level of Effort	Climate Change Impacts	Potential Diversion from Landfill Disposal	
1. Conduct an assessment on special curbside waste collections	Assessment	3	3	3	3	1	1	24
	Action as a result of the Assessment	1	2	3	2	1	1	
2. Evaluate recycling collection under the new IPR framework	Assessment	3	3	3	3	1	1	28
	Action as a result of the Assessment	3	3	3	3	1	1	
3. Review impacted ineligible properties with the transition to IPR	Assessment	3	3	2	3	1	1	24
	Action as a result of the Assessment	2	2	2	2	1	2	
4. Assess guidelines for waste collection from multi-family developments	Assessment	3	3	3	3	1	1	28
	Action as a result of the Assessment	3	3	3	2	1	2	
5. Evaluate the use of bag tags	Assessment	3	3	3	3	1	1	27
	Action as a result of the Assessment	3	2	3	3	1	1	
6. Investigate the potential to service the IC&I sector with organics collection	Assessment	3	3	3	2	1	1	25
	Action as a result of the Assessment	2	2	3	3	1	1	
7. Assess mandatory participation in the organics program	Assessment	3	3	3	3	1	1	31
	Action as a result of the Assessment	3	3	3	2	3	3	
8. Increased P&E campaign and research for organics		3	3	3	2	1	1	26
9. Update the Waste Management By-law to include the change to carts and bi-weekly collection		3	3	3	3	1	1	28
10. Continued Development of ERRC	Assessment	2	3	3	2	1	1	25
	Action as a result of the Assessment	1	2	3	1	3	3	
11. Review continued operation of HHW depots	Assessment	3	3	3	3	1	1	28
	Action as a result of the Assessment	3	3	1	3	3	1	
12. Assess the current rate schedule at County waste facilities	Assessment	3	3	3	3	1	1	27
	Action as a result of the Assessment	3	2	3	3	1	1	
13. Assess extending hours at County waste facilities	Assessment	3	3	3	3	1	1	26
	Action as a result of the Assessment	2	3	3	2	1	1	

Option		Economic Feasibility		Social Impacts		Environmental Impacts		Total*
		Annual Operating and Capital Costs	Level of Risk	Ease of Access and Participation	Level of Effort	Climate Change Impacts	Potential Diversion from Landfill Disposal	
14. Assess relocating Matchedash Waste Facility to the Medonte closed landfill	Assessment	3	3	3	2	1	1	21
	Action as a result of the Assessment	1	1	3	1	1	1	
15. Explore purchasing property in South Simcoe for future waste management facilities	Assessment	2	3	3	3	1	1	22
	Action as a result of the Assessment	1	1	3	1	2	1	
16. Enhance P&E programs		2	3	3	2	1	1	24
17. Collaborate with other County departments in the development of environmental sustainability initiatives		3	3	3	3	1	1	28
18. Develop a disaster debris management plan		2	3	3	2	1	1	24

\* For comparison purposes, multi-phase options have the assessment and action as a result of the assessment totalled; single-phase options have the assessment doubled.

### 5.3.2 Potential Impacts to Waste Diversion from Implementation of Options

The County is a high performing municipality that has implemented waste management services and programs that have a high return with respect to waste diversion (e.g., recycling). However, the County’s current waste diversion rate has been relatively stagnant at around 60% for the past ten years, noting that this rate is on the higher end of what is reasonably achieved in municipalities throughout Canada. Implementing the proposed single-phased options and the second phase of multi-phase options has the potential to increase the County’s diversion rate by an estimated 5%; however, to increase diversion on a higher end, to up to an estimated 10%, the County will need to couple the implementation of options with education, public participation, enforcement, infrastructure, ongoing service/program evaluation and adjustments, as needed. Additionally, increases to the County’s diversion rate are not expected to be immediate and are anticipated to occur over several years.

## 6.0

## Conclusions and Next Steps

### 6.1 Options to Carry Forward

Based on the results of the options evaluations (**Section 5.3**) and discussions with the County, 15 of the 18 options were selected to be carried forward (**Table 28**).

**Table 28: Options to Carry-Forward**

Category	Option
Waste Collections	1. Conduct an assessment on special curbside waste collection
	2. Evaluate recycling collection under the new IPR framework
	3. Review impacted ineligible properties with the transition to IPR
	4. Assess guidelines for waste collection from multi-family developments
	6. Investigate the potential to service the IC&I sector with organics collection
Organics Participation	7. Assess mandatory participation in the organics program
	8. Increased P&E campaign and research for organics
Waste Facilities	10. Continued development of ERRC
	11. Review continued operations of household hazardous waste depots
	12. Assess the current rate schedule at County waste facilities
	13. Assess extending hours at County waste facilities
	14. Assess relocating Matchedash Waste Facility to the Medonte Closed Landfill
	15. Explore purchasing property in South Simcoe for future waste management facilities
P&E	16. Enhance P&E programs
Other	18. Develop a disaster debris management plan

The three options that were not carried forward and their reasons based on discussion with the County included the following:

- Option 5 Evaluate the use of bag tags: Based on the research conducted it does not appear that this will be effective in increasing diversion;
- Option 9 Update the Waste Management By-law to include the change to carts and bi-weekly collection: This is currently already being completed; and
- Option 17 Collaborate with other County departments in the development of environmental sustainability initiatives: This is currently already being completed and the County will continue to collaborate with other County departments.

### 6.2 Next Steps

Of the options to carry forward, 12 require further assessment by the County. The assessments will include a report to Council which will only be implemented, if approved. Additionally, the remaining three options (Option 8: Increased P&E campaign and research for organics; Option: 16 Enhance P&E

programs; and Option 18: Develop a disaster debris management plan) will also be brought forward for Council’s approval prior to implementation.

A proposed implementation timeline for single-phased options and the first phase of multi-phased options has been provided in **Figure 19**.

**Figure 19: Implementation Timeline**

Category	Option	2023	2024	2025	2026	2027
Waste Collections	1 Conduct an assessment on special curbside waste collection	←→				
	2 Evaluate recycling collection under the new IPR framework	←→				
	3 Review impacted ineligible properties with the transition to IPR		←→			
	4 Assess guidelines for waste collection from multi-family developments		←→			
	6 Investigate the potential to service the IC&I sector with organics collection		←→			
Organics Participation	7 Assess mandatory participation in the organics program			←→		
	8 Increased P&E campaign and research for organics		←→			
Waste Facilities	10 Continued development of ERRC	←→				
	11 Review continued operations of household hazardous waste depots	←→				
	12 Assess the current rate schedule at County waste facilities				←→	
	13 Assess extending hours at County waste facilities			←→		
	14 Assess relocating Matchedash Waste Facility to the Medonte Closed Landfill		←→			
	15 Explore purchasing property in South Simcoe for future waste management facilities		←→			
P&E	16 Enhance P&E programs	←→				
Other	18 Develop a disaster debris management plan			←→		