MUNICIPAL INNOVATION COUNCIL

Waste Management Services Review

Final Report

January 2021 20-2896

Delivered by electronic mail

January 20, 2021

Municipal Innovation Council
Town of Saugeen Shores
600 Tomlinson Drive, Box 820,
Port Elgin ON
N0H 2C0

Attention: Jessica Linthorne
Director, Strategic Initiatives

Re: MIC Solid Waste Management Services Review – Final Report

Dear Jessica,

Dillon Consulting Limited (Dillon) is pleased to provide this report which summarizes the information collected as part of the Municipal Innovation Council (MIC)'s Solid Waste Management Services Review.

Through this report we believe that we have efficiently collected information on best practices and the participating municipalities' existing programs to provide a foundation for developing options that will enhance and improve the current waste management programs available to residents. This strategic review considered current and future community needs based on information collected from participating municipalities and government legislation and policies.

Thank you for this opportunity to assist you with this important assignment. We look forward to discussing this report and the next steps of the review.

Sincerely,

DILLON CONSULTING LIMITED

Alida Kusch

Alida Kusch
Project Manager

Our file: 20-2896

DILLON CONSULTING

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Acronyms, Abbreviations, Definitions

3Rs - Reduce, Reuse and Recycle - also, more recently: Rethink, Recover and Refuse.
AD - Anaerobic Digestion; a type of organics processing facility that produces biogas (methane) and digestate
AMO - Association of Municipalities of Ontario
AMR - Annual Monitoring Report; landfill reports
BASWR - Bruce Area Solid Waste Recycling
BB - Blue Box
BIAs - Business Improvement Associations
BRA - Bluewater Recycling Association
Bruce County - County
C&D - Construction and Demolition waste sector; also includes renovation waste
CCME - Canadian Council of Ministers of the Environment
CEPA - Canadian Environmental Protection Act
CIF - Continuous Improvement Fund
Datacall – The annual Ontario reporting process, overseen by RPRA (formerly Waste Diversion Ontario - WDO), that collects annual costs and tonnes managed by Ontario municipal waste and recycling programs. The Datacall calculates diversion rates for each municipality and results are used to assign Blue Box funding allocation to each reporting municipality.
Dillon – Dillon Consulting Limited
ECA - Environmental Compliance Approval (formerly Certificate of Approval, CoA); waste site permit requirement by Ontario MECP
EPR - Extended Producer Responsibility; policy for Ontario Blue Box program also referred to as IPR or Individual Producer Responsibility
GAP - Generally Applied Principles; Datacall calculation methodology used to calculate diversion rates for Ontario municipalities
H&S - Health and Safety
IC&I – Industrial, Commercial and Institutional waste sector
KWMC - Kincardine Waste Management Centre
LEED - Leadership in Energy and Environmental Design
LYW - Leaf and Yard Waste; typically refers to residential leaf and garden waste
M3RC - Municipal 3Rs Collaboration
MECP - Ontario Ministry of Environment, Conservation and Parks; formerly MECC- Ministry of Environment and Climate Change
MHSW - Municipal Hazardous Special Waste
MIC - Municipal Innovation Council
MRF - Material Recycling Facility; facility for sorting recyclables for sale to end market processors
MSW - Municipal Solid Waste

MWP - Mixed Waste Processing; a disposal technology option that sorts garbage from low quality recoverable materials
NFP - Not For Profit
OCWA - Ontario Clean Water Association
OWMA - Ontario Waste Management Association
P&E - Promotion and Education
PAYT - Pay as you throw
PDO - Public drop off
PS - Polystyrene
RPRA - Resource Productivity and Recovery Authority; formerly Waste Diversion Ontario (WDO) who oversees Ontario diversion program and annual Datacall reporting. Acts under the MECP.
RRCEA – Resource Recovery and Circular Economy Act; legislation under the MECP in Ontario
RSC - Regional Service Commissions
SO – Stewardship Ontario
SSO - Source Separated Organics; kitchen waste
SUPs - Single Use Plastics
SWANA - Solid Waste Association of North America
SWMP - Solid Waste Management Plan
TS - Transfer Station
WDA - Waste Diversion Act
WDO - Waste Diversion Ontario
WEEE - Waste Electronic and Electrical Equipment
WFOA – Waste Free Ontario Act: legislation under the MECP in Ontario

Executive Summary

The Municipal Innovation Council (MIC) is a collaborative pilot project aimed to collaborate with member municipalities to identify opportunities for greater operational efficiency and provide recommended next steps to interested parties. The three-year program is intended to focus on waste management, transportation, e-services and climate change/adaptability.

The MIC recently received funding through the Municipal Modernization Program to complete a solid waste management service review. The goal of this project is to review waste management services in seven municipalities to determine more efficient ways to deliver waste management services. This includes assessing current waste management systems and comparing them with best practices to generate ideas that reduce the amount of waste ending in landfills in the participating municipalities which include the following:

- Arran-Elderslie
- Brockton
- Huron-Kinloss
- Kincardine
- Northern Bruce Peninsula
- Saugeen Shores
- South Bruce

The municipalities listed in this service review are a part of Bruce County (the County) which is home to over 66,000 residents. It is noted that Northern Bruce Peninsula was added to this study after the tender process and Southern Bruce Peninsula, which is also located within the County, decided not to join the study.

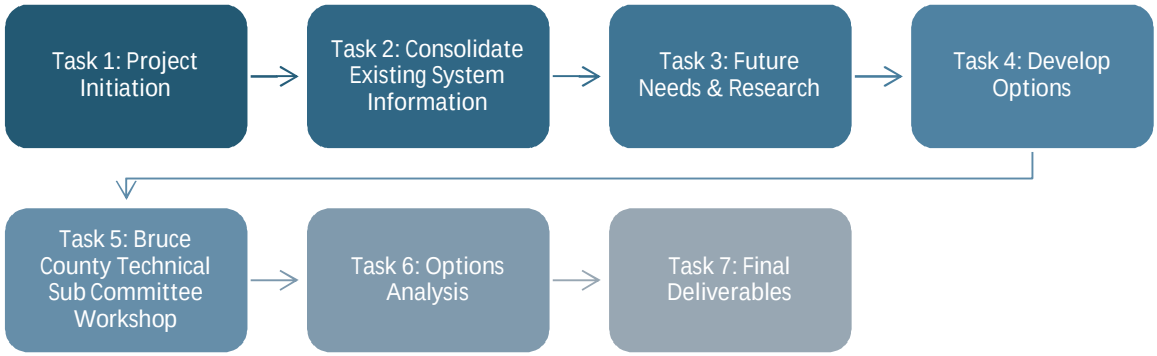
In 2020, Dillon Consulting Limited (Dillon) was engaged by the MIC to conduct a waste management service review to determine options to enhance and improve the current waste management programs available to its residents. During the tender process, it was noted that there is a desire at both the municipal and county level to maximize the use of existing landfill site capacity. The strategic review considered current and future community needs which required consideration of several factors, including the following:

- Review of the existing waste collection system and processes by local municipality;
- Identification of noted local challenges, including low/sporadic participation, seasonal residents, cross-contamination, predator attraction and illegal disposal;
- Engaging stakeholders involved in waste management to provide insight on potential recommendations;
- Understanding of the potential impacts to relevant and proposed legislative changes and provide flexibility in the strategy to adapt to future changes that are currently not defined (i.e., Blue Box Program Plan);

- Identifying reasonable and potential options for waste management services, including opportunities for municipalities to collaborate together; and
- Identification of potential cost savings or cost sharing measures.

The project approach and methodology is highlighted below.

Project Approach and Methodology



Task 1: Project Initiation

The project kick-off meeting was attended by representatives from each of the participating municipalities. During the meeting, the project scope was presented and requests for waste management data and reports were made by Dillon.

Task 2: Consolidate Existing System Information

Focused, interactive information gathering interviews were held with select representatives of each of the participating municipalities which included staff having a connection to waste management planning and operations. Selected representatives were identified in consultation with the MIC project lead. The discussions focused on the following items:

- Description of waste management services provided;
- Roles and responsibilities of staff and contractors with respect to waste management including level of effort and associated costs;
- Identification of current public education and user awareness efforts;
- Strengths and challenges of existing practices;
- Suggested improvements to current challenges and/or best practices from other jurisdictions;
- Opportunities and/or concerns with the elements of a waste management service review; and
- Opportunities for municipalities to collaborate together.

Elected Officials were provided the opportunity to provide feedback on the study. A brief questionnaire was distributed to participating municipal elected officials by the MIC's Project Manager.

Task 3: Future Needs and Research

Dillon completed an analysis on the data received of existing information and interviews with municipalities to determine high level solid waste management needs common to MIC municipalities in the County. A jurisdictional review of waste management approaches for six comparable Ontario municipal jurisdictions was completed. The six preferred jurisdictions by the MIC for this study were all located in South Eastern Ontario and included the following jurisdictions:

- Oxford County;
- Grey County (Including Southgate, Chatsworth and Georgian Bluffs);
- City of Guelph;
- District of Muskoka;
- Peterborough County; and
- Wellington County.

Best practices were identified from the jurisdictional review.

A high level review of trends in the waste management industry was reviewed based on current and proposed solid waste management regulation and policies impacting municipal solid waste management operations in Ontario and Canada. These trends were considered in the development of potential options to support alignment with potential future regulatory changes in waste management. The trends included:

- Full Extended Producer Responsibility (EPR);
- Food and Organic Waste Framework;
- Circular Economy; and
- Additional waste material designations in the Waste Free Ontario Act (WFOA).

Task 4: Develop Options

With an understanding of the MIC municipalities' current position and future needs and trends, a list of high level options that could fulfill the needs identified was developed. Waste management needs include the following services and operations:

- Facilities and Infrastructure;
- Collection;
- Diversion and Waste Reduction;
- Policy and Regulations;
- Promotion and Education;
- Compliance and Enforcement; and
- Performance, Targets, Data, Monitoring and Reporting.

Task 5: Bruce County Technical Sub-Committee Workshop

Following discussion with the Bruce County Technical Sub-Committee workshop the high level options were refined down to 25 options. During the meeting a list of draft criteria to evaluate each of the

options was also confirmed, which included draft triple bottom line criteria (financial impacts, environmental impacts and social impacts).

Task 6: Options Analysis

Using the criteria confirmed by the Bruce County Technical Sub-Committee and MIC, and the high level rationale for each of the confirmed options, Dillon proposed which options the MIC may consider to pursue. The overall financial, environmental and social impacts as well as the opportunity for service efficiencies are reflected in the proposed recommended waste management options.

Based on the results of the options evaluation all of the options are recommended for the MIC to pursue. The recommendations consider the overall financial, environmental and social impacts as well as the opportunity for service efficiencies. It also reflects further feedback that was provided by the MIC. However, there are several recommendations that are identified as more of a priority for the County as another option(s) is contingent of the completion of that option, or the option coincides with changes to a program, or the options is a key component to County's long-term waste management priorities. All of the options and their recommended timeline for implementation have been identified below in the table below. Items that are identified as priority have been highlighted.

Recommendations and Timeline for Implementation

#	Option	Timeline for Implementation
1	Implement disposal site efficiencies	2025
2	Enhance municipal collaboration and partnership	2022
3	Increase opportunities for reuse and sharing participation	2024
4	Lead by example of 3R initiatives and policies	2024
5	Explore C&D waste diversion initiatives	2025
6	Explore LEED design incentives associated with C&D waste management for new development approvals and permits	2026
7	Update County Waste Management Strategy Master Plan	2022
8	Expand MHSW program	2025
9	Transfer diversion programs to County's responsibilities	2027
10	Transfer waste collection to County's responsibilities	2027
11	Implement County organics collection program	2024
12	Determine processing options for County organics	2023
13	Transfer all waste management roles to Bruce County	2027
14	Each municipality determines their long-term waste disposal needs	2022
15	Verify monitoring and reporting data	2022
16	Identify resources required at the County level to administer and manage any new County waste management roles	2025
17	Update P&E messaging to current issues	2023
18	Implement best practices on P&E delivery	2023
19	Conduct a business review of BASWR	2021
20	BASWR management structure review and update	2022
21	Develop a template for municipalities to report to BASWR	2022

#	Option	Timeline for Implementation
22	Use weight based data instead of estimates	2023
23	Explore shared weigh scale potential partnerships	2023
24	Prepare current state financials in preparation for decision making for transition	2021
25	Internally assess EPR scenarios and expanded blue box program	2021

This study has provided a comprehensive insight into developing potential options for consideration with the goal of achieving efficiencies in current and future waste services provided to residents. Pooling of resources and partnerships among MIC municipalities could be the basis of starting discussions among interested parties leading to formal partnerships and terms of agreements. Following discussions with municipal staff and elected officials in Bruce County, the MIC should begin to implement priority options that have received municipal and county approval. Progress should be monitored and reported back by the MIC to municipalities and the County.

1.0 Introduction

The Municipal Innovation Council (MIC) is a collaborative pilot project aimed to collaborate with member municipalities to identify opportunities for greater operational efficiency and provide recommended next steps to interested parties. The three-year program is intended to focus on waste management, transportation, e-services and climate change/adaptability.

The MIC recently received funding through the Municipal Modernization Program to complete a solid waste management service review. The goal of this project is to review waste management services in seven municipalities to determine more efficient ways to deliver waste management services. This includes assessing current waste management systems and comparing them with best practices to generate ideas that reduce the amount of waste ending in landfills in the participating municipalities which include the following:

- Arran-Elderslie
- Brockton
- Huron-Kinloss
- Kincardine
- Northern Bruce Peninsula
- Saugeen Shores
- South Bruce

The municipalities listed in this service review are a part of Bruce County (the County) which is home to over 66,000 residents. It is noted that Northern Bruce Peninsula was added to this study after the tender process and Southern Bruce Peninsula, which is also located within the County, decided not to join the study.

In 2020, Dillon Consulting Limited (Dillon) was engaged by the MIC to conduct a waste management service review to determine options to enhance and improve the current waste management programs available to its residents. During the tender process, it was noted that there is a desire at both the municipal and county levels to maximize the use of existing landfill site capacity. The service review considered current and future community needs which required consideration of several factors, including the following:

- Review of the existing waste collection system and processes by local municipality;
- Identification of noted local challenges, including low/sporadic participation, seasonal residents, cross-contamination, predator attraction and illegal disposal;
- Engaging stakeholders involved in waste management to provide insight on potential recommendations;
- Understanding of the potential impacts to relevant and proposed legislative changes and provide flexibility in the strategy to adapt to future changes that are currently not defined (i.e., Blue Box Program Plan);

- Identifying reasonable and potential options for waste management services, including opportunities for municipalities to collaborate together; and
- Identification of potential cost savings or cost sharing measures.

1.1 Objectives

With reference to the RFP for this assignment, as well as discussions held with MIC representatives during the initial stages of the project, the key objectives of this assignment were as follows:

- Consolidate information on current solid waste management services and funding mechanisms within the seven participating municipalities and Bruce County;
- Engage MIC representatives to address noted data gaps and identify current service delivery challenges and future sustainability concerns;
- Identify "best practice" approaches from other relevant jurisdictions to address identified vulnerabilities of the MIC's existing service model;
- Develop and evaluate candidate options to mitigate vulnerabilities towards providing a sustainable, diversion-based solid waste management program that can enable the MIC with finding service efficiencies; and
- Provide a roadmap for moving forward to achieve the MIC's goals.

1.2 Limitations

This study is limited to reviewing the current municipal solid waste (MSW) management services and operations for the participating municipalities, their Blue Box partnership with Bruce Area Solid Waste Recycling (BASWR) and the upper-tier municipality, Bruce County. For this study, solid waste refers to MSW generated or produced by its residents and commercial sector businesses or institutions that a municipality or the County may service. This study's scope does not include waste from the following sources:

- Municipal sources such as wastewater treatment plants that produce sewage sludge or biosolids. Sludge or biosolids waste streams are typically managed under the waterworks utility of the municipality.
- Nuclear waste, or include the Bruce Power Site, which is in Kincardine.
- Liquid waste or hazardous waste, except for the provincial mandated Municipal Hazardous and Special Waste (MHSW) collection program operated by Bruce County. MHSW includes household hazardous waste material such as paints & stains, household cleaners, pharmaceuticals, propane tanks, antifreeze, fluorescent lights, fire extinguishers, used oil, oil filters, fertilizers, pesticides, aerosols, solvents, fuel and pool chemicals.

The outcomes of this study are based on data and information received from the participating MIC municipalities, BASWR, Bruce County and municipalities contacted for best practices. Data presented in municipal reports or obtained from municipal staff and/or elected official in interviews and surveys are presented as received without discretion.

2.0 Background

2.1 Background to the Service Review

The MIC is a collaborative pilot project aimed to find and implement efficiencies in municipal service delivery. Recently, the MIC received funding through the Municipal Modernization Program to complete a solid waste management service review.

In 1995, Bruce County completed and implemented a Solid Waste Management Master Plan. The plan provided an inclusive strategy for existing landfill capacity and waste diversion. The responsibility for the implementation of the plan and the administration of the waste management system is shared between the County and the local municipalities as per County Bylaw No. 3544, No. 3545 and No. 3546. As each municipality is responsible for waste collection and disposal services, either through the local municipal services or by private contract, each solid waste management system is unique. All landfills are owned and operated by the local municipality.

Each municipality provides weekly garbage collection and bi-weekly collection of recycling (with exception to Northern Bruce Peninsula that provides weekly recycling collection); however, the collection days vary by municipality. Some municipalities provide collection services on only two days per week, where some municipalities collect four days per week. Additionally, the day that recycling is collected is not always the same day that garbage is collected for many of the municipalities. Households do not receive organics (food scraps) or leaf and yard waste collection; however, leaf and yard waste can be brought to a landfill where it is composted to be used on-site for cover material (where available). Several municipalities sell backyard composters to residents at cost.

In addition to the curbside recycling collection program, residents can recycle a variety of materials at their local landfills. Materials include blue bin materials (those accepted curbside), waste electronics, polystyrene, tires, scrap metal and white goods, shingles and drywall, household batteries, fluorescent lights and film plastic. Some municipalities also have reuse centres. The County also manages the MHSW collection program throughout the County, which included 16 collection events in 2018.

2.2 Municipalities Included in the Review

This review was completed for the seven partners of the MIC and the Northern Bruce Peninsula. As previously indicated, the Town of South Bruce Peninsula was invited to participate; however, they declined participation in the study and therefore was not interviewed. Note that the Town of Saugeen Shores recently completed their own municipal Long-Term Waste Management Plan[1] by GM Blue Plan Engineering on December 9, 2019 which supersedes the one completed in 2011. This report was

[1] https://www.southbrucepeninsula.com/en/town-hall/resources/Waste-Management-Plan-Final-December-2019.pdf

completed and received by Council in October 2020. Bruce County and BASWR were also consulted in the preparation of this review.

Current populations of the participating municipalities are provided in Table 1. The population of Bruce County is approximately 66,500 and the participating municipalities represent 87% of the County's population.

Table 1: Current Population of Participating Municipalities

Municipality	Population*
Arran-Elderslie	6,803
Brockton	9,461
Huron-Kinloss	7,069
Kincardine	11,389
Northern Bruce Peninsula	3,999
Saugeen Shores	13,715
South Bruce	5,639
Total	58,075

* Statistics Canada 2016 Data

2.2.1 Study Goals and Outcomes

During municipal interviews, discussed further in Section 3.2, municipalities were asked to outline their goals and intended outcomes of this study which is summarized in Table 2).

Table 2: Study Goals and Outcomes – per Municipality and County

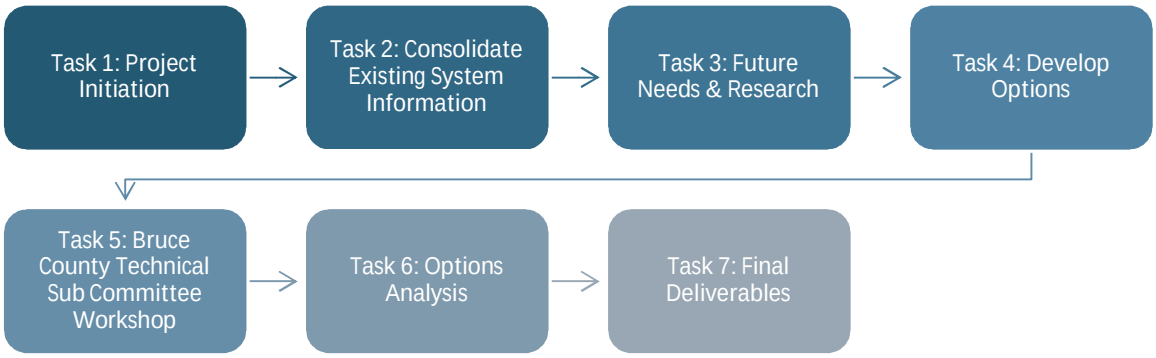
Municipality	MIC Goals and Outcomes
Arran-Elderslie	• Create more diversion and recycling programs • Provide direction on the future of the Blue Box Program • Increase recycling participation • Consistency with recyclable materials among municipalities (e.g. Polystyrene)
Brockton	• More efficient ways to manage solid waste management • Any cost saving measures • Implement a composting program • Collaboration and partnerships with other municipalities to share programs and resources • Markets for recyclables are reducing and need a more effective recycling program
Huron-Kinloss	• More efficient ways to manage solid waste management • Increase diversion • Collaboration and partnerships with other municipalities to share programs and resources • Want the County to take over logistics, contracts and subject expertise of waste
Kincardine	• Increase diversion • Collaboration and partnerships with other municipalities to share programs and resources

Municipality	MIC Goals and Outcomes
	• County to take on a larger role in waste management • Require segregated loads of drywall and asphalt from IC&I and C&D customers • More diversion within local small business and restaurants
Northern Bruce Peninsula	• County to take on a larger role in waste management • Set up some landfills as transfer stations • More convenient collection date for seasonal residents (most only stay for the weekend and collection is on Monday) • More staffing resources
Saugeen Shores	• County to take on a larger role in waste management • Provide direction on the future of the Blue Box Program • More efficient ways to manage solid waste management
South Bruce	• Consistency with recyclable materials (e.g. Polystyrene) among municipalities • Provide direction on the future of the Blue Box Program
Bruce County	• Planning for the future • Determining opportunities, economies of scale and availability of resources

3.0 Approach to the Review

The project was completed in seven tasks. The project tasks and approach is highlighted below in Figure 1. Each task is described in the subsections below.

Figure 1: Project Approach and Methodology



3.1 Compilation of Information

The project kick-off meeting was attended by representatives from each of the participating municipalities. During the meeting, the project scope was presented and requests for waste management data and reports were made by Dillon. After municipal and County data and reports were compiled, Dillon reviewed the received solid waste management information which included the following:

- 2017 to 2019 tonnage and financial data for all services;
- RPRA Datacall reports;
- Regional and municipal annual waste reports;
- Existing contract agreements;
- Associated regulations and bylaws; and
- High level maps for main services (e.g., MRF, landfill).

All reports received from each of the participating municipalities are listed in the References section. Reports and data were summarized in a working document for each municipality to identify any data gaps or clarifications needed during the interviews (discussed in Section 3.2).

3.2 Municipal Interviews and Surveys

Focused, interactive information gathering interviews were held with select representatives of each of the participating municipalities which included staff having a connection to waste management planning

and operations. Selected representatives were identified in consultation with the MIC project lead. The discussions focused on the following items:

- Description of waste management services provided;
- Roles and responsibilities of staff and contractors with respect to waste management including level of effort and associated costs;
- Identification of current public education and user awareness efforts;
- Strengths and challenges of existing practices;
- Suggested improvements to current challenges and/or best practices from other jurisdictions;
- Opportunities and/or concerns with the elements of a waste management service review; and
- Opportunities for municipalities to collaborate together.

More specifically, the conversations asked the following questions:

- What are your goals for this MIC study?
- What are your current challenges with respect to solid waste management?
- What are the biggest hurdles to overcome?
- What is currently working, what is not working?
- What needs some improvement?
- What would help to increase participation with your programs?
- What is the current political climate for change / adoption of new strategies?
- What is the relationship like with neighbouring municipalities?
- Are there any shared resources (now or in the past)?
- How are seasonal residents communicated with?
- What do you typically hear about from residents?
- How many staff are dedicated to solid waste?
- How are you intending to or how have you transitioned towards the new provincial IPR programs for Tires, MHSW/HHW, Electronics and Blue Box programs? What has/will change for you?
- What are the COVID-19 impacts to waste management system?

Interviews were scheduled over a two-week timeframe in June 2020. Due to the covid-19 pandemic, meetings were held virtually. Dillon completed interviews with seven participating municipalities, the County and BASWR.

The interviews and attendees included the following:

- Huron Kinloss, June 11: Mary Rose Walden – CAO, John Yungblut - Director Public Works
- Arran- Elderslie, June 11: Scott McLeod - Manager of Public Works,
- Bruce County, June 12: Matt Meade - Strategic Initiatives Specialist, Kerri Meier – former Environment Coordinator
- Saugeen Shores, June 15: Amanda Froese - Director, Infrastructure and Development, Colin Saunders - Manager, Environmental Services
- Kincardine, June 17: Adam Weishar - Director of Public Works

- Brockton, June 18: Sonya Watson -CAO, John Strader - Roads Supervisor, Cally Mann - Municipal Executive Coordinator, Gregg Furtney - Director of Operations
- South Bruce, June 18: Leanne Martin - CAO/Clerk
- Northern Bruce Peninsula, June 19: Troy Cameron – PW Manager, Kiersten Thompson – PW Administration
- BASWR, June 25: Karrie Drury - Controller

3.2.1 Elected Official Consultation

Elected Officials were provided the opportunity to provide feedback on the study. A brief questionnaire was distributed to participating municipal elected officials by the MIC's Project Manager in June 2020 which included the following questions:

- What are the municipality's goals for this study? What outcomes would you like to see?
- What are the municipality's current challenges with respect to solid waste? What are the biggest hurdles to overcome?
- What is working well with respect to solid waste?
- What ideas and opportunities for improvement should be considered in the Solid Waste Service Review that could benefit the municipality and Bruce County municipalities?

Responses were received from Elected Officials representing Arran-Elderslie and Saugeen Shores. Feedback is provided in Section 5.0.

3.3 Future Needs and Research Methodology

Dillon completed an analysis on the data received of existing information and information obtained through interviews with municipalities to determine high level solid waste management needs common to MIC municipalities in the County. A jurisdictional review of waste management approaches for six comparable Ontario municipal jurisdictions was completed. Best practices were identified from the jurisdictional review. The methodology to the jurisdictional review and best practices is provided below in Section 3.3.1 and the results are provided in Section 6.0.

In addition, a high level review of trends in the waste management industry was documented in order to consider options that align with potential future changes (e.g., Extended Producer Responsibility, Food and Organic Waste Framework, circular economy and additional material designation).

3.3.1 Jurisdictional Review

The aim of the jurisdictional review was to identify established waste management approaches and best practices that:

- Foster waste diversion;
- Provide effective residential services; and
- Enable the efficient and sustainable use of resources while managing costs.

The information acquired from the data, reports and interviews with MIC and municipal staff participants was reviewed to identify potential areas for improvement throughout the County. Based on those areas that fit the context of this assignment and met anticipated growth and future trends, a list of waste management services, programs and approaches for the jurisdictional review was compiled. In order to select which jurisdictions were to be included in the MIC service review, the following were considered:

- Population;
- Seasonal population;
- Population Density (/km^2);
- Regional approach to services;
- RPRA Datacall municipal grouping (#5) Rural Regional;
- Waste diversion rate (%);
- Central landfill site for disposal;
- Multiple depot and transfer stations;
- Organics (food, leaf and yard waste) collection program or ban;
- Distance to recyclable materials' end markets; and
- EPR Blue Box program.

A summary table of the 25 municipal jurisdictions considered for the review, along with their high level relevant waste management approaches, are included in Appendix A.

3.3.1.1 Short List Selection

Dillon provided the list of 25 potential jurisdictions to the MIC project team for their input. The MIC and Dillon selected six for the jurisdictional review. The six jurisdictions were all located in South Eastern Ontario and included the following jurisdictions:

- Oxford County;
- Grey County (Including Southgate, Chatsworth and Georgian Bluffs);
- City of Guelph;
- District of Muskoka;
- Peterborough County; and
- Wellington County.

Dillon gathered public information regarding each jurisdictions' municipal solid waste management services and program from websites, RPRA and publicly available reports. Dillon confirmed findings and built on to Dillon's research through follow-up interviews with each jurisdiction.

3.3.2 Best Practices Identified from the Jurisdictional Review

In addition to the jurisdictional review research, best practices and/or innovative approaches to managing municipal solid waste was researched by accessing publically-available sources such as

studies, articles and reports completed by the Continuous Improvement Fund (CIF), Resource Productivity and Recovery Authority (RPRA), Ontario Waste Management Association (OWMA), Solid Waste Association of North America (SWANA), Council meeting minutes and industry media articles.

Based on the above data sources and information compiled from the jurisdictional review for the six selected municipalities and Counties, several common solid waste management best practices and approaches were identified. The best practices identified considered the following factors:

- Provincial and national best practices;
- Recommendations to reduce the volume of waste to landfills including building and construction industry waste;
- Cost savings and/or potential cost sharing measures; and
- Strategies to support efficient waste management.

The identified best practices are presented in Section 6.0.

3.3.3 Future Trends in Waste Management

A high level review of trends in the waste management industry was reviewed based on current and proposed federal and provincial solid waste management regulation and policies impacting MSW management operations. These trends were considered in the development of potential options to support alignment with potential future regulatory changes in waste management including:

- Full Extended Producer Responsibility (EPR);
- Food and Organic Waste Framework;
- Single-Use Plastics;
- Circular Economy; and
- Additional waste material designations in the Waste Free Ontario Act (WFOA).

A high level review of future waste management trends is presented in Section 4.0. Future waste management needs and gaps are presented in Section 7.0.

3.4 Options

With an understanding of the MIC municipalities' current position and future needs and trends, a list of high level options that could fulfill the needs identified was developed. Waste management needs include the following services and operations:

- Facilities and Infrastructure;
- Collection;
- Diversion and Waste Reduction;
- Policy and Regulations;
- Promotion and Education;
- Compliance and Enforcement; and

- Performance, Targets, Data, Monitoring and Reporting.

Informational and data sources referenced in the development of the options included the following:

- Review of reports from participating municipalities;
- Interactive information gathering interviews with MIC municipalities;
- Existing waste management services identified in the jurisdictional reviews; and
- Findings from research on provincial and national best practices and innovative approaches to managing waste.

The options were grouped into six category types. Initially, a long-list of 21 potential program options was proposed to the MIC. A final list of 26 potential options were discussed and developed in collaboration with MIC representatives during a virtual workshop held in August 2020. Note that five of the 26 options were added by the MIC during the workshop. Based on MIC feedback, one option was eliminated from the proposed option list. All 25 final options were selected for high level evaluations.

3.4.1 Option Evaluation

A list of draft criteria to evaluate each of the options was developed in advance of the August workshop conducted by the Dillon team with the MIC and County representatives, discussed further in Section 8.0. The draft triple bottom line criteria included:

- Financial impacts;
- Environmental impacts; and
- Social impacts.

The purpose of the workshop was to seek input from the MIC representative to finalize the criteria to carry forward to provide high level rationale for each option. The criteria for evaluation were developed in collaboration with MIC representatives during the virtual workshop in August and finalized during a September 2020 meeting. The 25 options were evaluated by Dillon initially, followed by review and feedback by the MIC representative. Evaluation results and feedback from MIC representatives was provided to Dillon in November 2020. The list of 25 options, evaluation criteria and the evaluation results are presented in **Section 8.0**.

3.5 Recommendations

Using the criteria confirmed during the workshop, and the high level rationale for each of the confirmed options, Dillon proposed which options the MIC may consider to pursue. The overall financial, environmental and social impacts as well as the opportunity for service efficiencies are reflected in the proposed recommended waste management options. A suggested timeline, by year, for planning purposes as a roadmap is provided. The recommendations are presented in Section 9.0.

4.0 Waste Management Trends and Policy Framework

There are a number of solid waste management industry trends and policies that currently have or will have an impact on municipal waste management planning in Ontario. A brief overview of these trends and polices are presented in the following subsections.

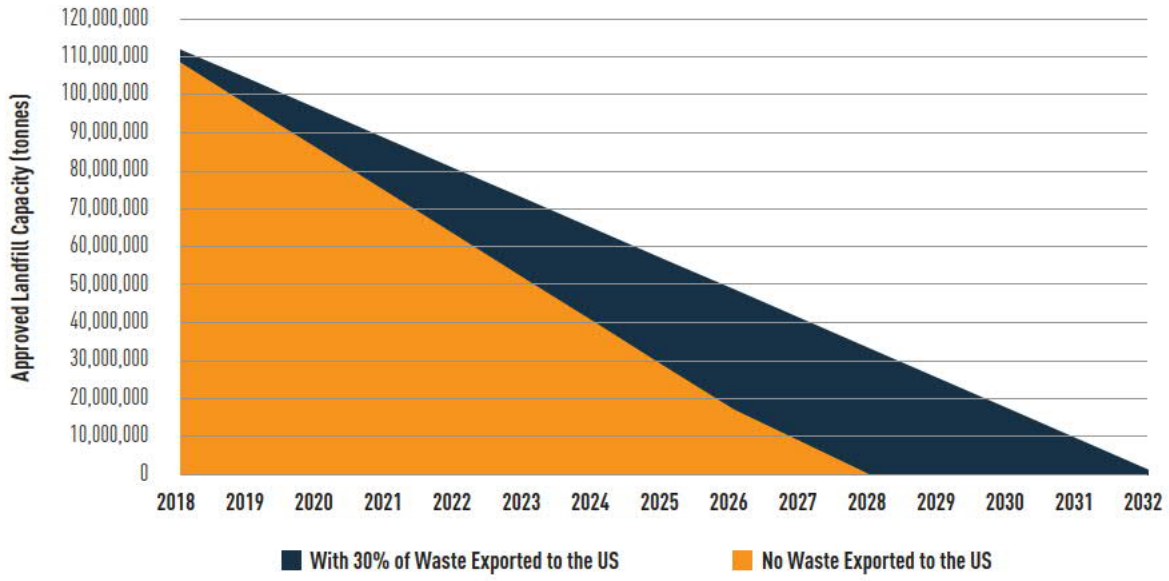
4.1 Ontario Landfill Capacity

The availability of disposal capacity in Ontario is limited, as demonstrated by the Ontario Waste Management Association's (OWMA) report[2] on the State of Waste in Ontario: Landfill Report (December 2018). OWMA's second Landfill Report, provides accurate and timely data on the capacity of Ontario's public and private sector landfills to serve Ontario's waste disposal needs. The OWMA's dataset includes just over 800 active landfill sites in Ontario. Almost 65% of the sites are municipal and have almost 123 million tonnes of capacity remaining (with the majority of capacity being in Southern Ontario) noting that all but one of these sites has restrictions on where waste can be received from within Ontario.

Based on population growth, and assuming a constant waste generation rate per capita, the Province's remaining landfill capacity is expected to be depleted within 12 years, by 2032. Or, should the US border close to Ontario waste, this capacity is estimated to be depleted within 10 years, or by 2028. This forecast is anticipated to have changed as a result of the impacts of the COVID-19 pandemic on waste generation patterns. Medical waste has increased as well as residential waste streams resulting from people staying home and conversely lower commercial waste streams due to business closures. Waste generation patterns will continue to shift as the economy restarts. The Canada-United States border has remained open for essential services and trade during the pandemic; however, any border closures would quickly use up the remaining landfill capacity in Ontario. Figure 2 highlights Ontario's remaining landfill capacity based on current approved landfill capacity.

[2] www.owma.org/articles/2019-owma-landfill-report

Figure 2: Ontario's Remaining Landfill Capacity



Source: State of Waste in Ontario: Landfill Report (December 2018)

An increasing percentage of the remaining landfill capacity in Ontario is being concentrated in a small number of the largest landfill sites. Based on OWMA's database, Ontario's remaining landfill capacity is held by only seven sites, or 56% of the total. The study suggests that as the smaller landfill sites close, more waste will need to be managed by larger landfill sites.

4.2 Federal

In addition to federal legislations, the federal government's intent to ban select single-use plastics will have an impact on Bruce County. These are described in the following subsections.

4.2.1 Federal Legislation

The following federal legislations may be applicable to how waste is managed in Bruce County:

- The Canadian Environmental Assessment Act;
- The Canadian Environmental Protection Act;
- The Transportation of Dangerous Goods Act;
- Canadian Council of Ministers of the Environment:
  - Canada-Wide Action Plan on Zero Plastic Waste, Phase1, 2019;
  - Strategy on Zero Plastic Waste, 2018;
  - Composability Standard and Certification Protocol, 2010;
  - Canada-wide Action Plan for Extended Producer Responsibility, 2009;
  - Canada-wide Strategy for Sustainable Packaging, 2009;
- National Pollution Release Inventory;

- Federal Climate Change Policy; and,
- Canadian Food Inspection Agency.

4.2.2 Federal Policies

4.2.2.1 Single-Use Plastics

On June 10, 2019, the federal government announced its intent to pursue a ban on select single-use plastics (SUPs), which would largely mirror the ban currently being implemented by jurisdictions in the European Union. On October 7, 2020 the Federal Minister of Environment and Climate Change announced their statutory direction on single-use plastics in Canada. The goal will be to ban the listed items by the end of 2021, and conclude a pathway to develop further regulations with the provinces and territories within the next one to two years. Citing the need to consult, the government will be soliciting feedback on a "discussion paper" until December 9, 2020. The finalized regulations would come into effect at the end of 2021.

The discussion paper introduces three primary tactics to reduce plastic pollution:

- Banning certain harmful single-use plastics (SUPS by enacting regulation that targets sources of plastic pollution through the Canadian Environmental Protection Act (CEPA), 1999. The "plastic manufactured items" identified:
  - Plastic checkout bags;
  - Stir sticks;
  - Six-pack rings;
  - Cutlery;
  - Straws; and
  - Food service ware made from problematic plastics, such as expanded polystyrene (PS).
- Establishing performance standards that includes recycled content requirements. The Government of Canada has set a 50% recycled content target in plastic products by 2030. Through CEPA, require recycled content in plastics and packaging includes:
  - Minimum percentage of recycled content that producers would need to meet;
  - Rules for measuring and reporting to evaluate a product's conformity with recycled content claims; and
  - Guidelines and tools to support compliance.
- Ensuring end-of-life responsibility.

These potential plastic bans align with the efforts of the Canadian Council of Ministers of the Environment's (CCME) Strategy on Zero Plastic Waste and the National Zero Waste Council's focus on Product Design and Packaging. Both leading national organizations are also committed to supporting a Canada-wide shift from a "take-make-dispose" economy to a circular economy.

The federal government intends on working with the provinces, territories, and industry to advance EPR to be consistent, comprehensive, and transparent nationally on topics such as:

- Developing national guidance, through the CCME, that includes common material categories and product definitions;
- Performance standards to guide reuse and recycling programs;
- Options to encourage innovation and reduce costs; and
- Standard monitoring and verification approaches.

At the time of this report, the world is experiencing the global pandemic caused by COVID-19, which has increased the amount of SUPs generated due to health and safety concerns.

4.3 Provincial

Subsections below highlight the provincial legislations and policies that impact how waste is managed within Bruce County as well as policies and guidelines such as Food and Organic Waste Policy and Made-In Ontario Environment Plan.

4.3.1 Provincial Legislation

The following is the key provincial legislation that may be applicable to how waste is managed in Bruce County:

- Ontario Environmental Assessment Act;
- Ontario Environmental Protection Act;
  - 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: Industrial, Commercial and Institutional Source Separation Programs;
- Waste-Free Ontario Act, 2016 (Bill 151)
  - Waste Diversion Transition Act, 2016;
  - Resource Recovery and Circular Economy Act, 2016;
- Ontario Green Energy Repeal Act, 2018;
- Ontario Municipal Act;
- Ontario Water Resources Act;
- Safe Drinking Water Act;
- Pesticides Act;
- Ontario Building Code Act;
- Ontario Planning Act;
- The Development Charges Act;
- Ontario Provincial Offences Act;
- Ontario Highway Traffic Act;
- Food and Organic Waste Policy Framework, 2018;

- Preserving and Protecting our Environment for Future Generations: A Made-In-Ontario Environmental Plan, 2018;
  - Discussion Paper: Reducing Litter and Waste in Our Communities.

4.3.2 Provincial Policies

The following subsections describe the province's current policies that impact how waste is managed within Bruce County.

4.3.2.1 Food and Organic Waste Policy Statement

The Food and Organic Waste Policy Statement, was issued under the Resource Recovery and Circular Economy Act - Section 11, in 2016, and provides direction to provincial ministries, municipalities, industrial, commercial and institutional (IC&I) establishments, and the waste management sector to increase reduction and resource recovery of food and organic waste. To reduce food and organic waste, the province has issued the Food and Organics Waste Policy Statement that will:

- Educate people about the importance of preventing and reducing food and organic waste;
- Expand green bin or similar collection systems in large cities and to relevant businesses;
- Set food and organic waste reduction and recovery targets of between 50% and 70%;
- Help more businesses, condos and apartment buildings across the province collect food and organic waste; and
- Help rescue surplus food from grocery stores, restaurants and hotels.

Ontario's Food and Organic Waste Policy Statement, sets a policy direction for the Province for food and organic waste. It is a legal document providing direction to public and private parties on "waste reduction and resource recovery through preventing and reducing food waste, effectively and efficiently collecting and processing food and organic waste, and reintegrating recovered resources back into the economy." It states that certain sectors must ensure that they act in a manner that is consistent with the policy statement when engaging in actions related to resource recovery and waste reduction. The Policy must be cross-referenced and considered alongside other existing policies, e.g., Environmental Protection Act; Planning Act; Environmental Assessment Act; Water Resources Act; etc.

The Statement references the Ontario Food Recovery Hierarchy, which provides the following priorities in order of importance:

- Reduce: prevent or reduce food and organic waste at the source;
- Feed People: safely rescue and redirect surplus food before it becomes waste; and
- Recover Resources: recover food and organic waste to develop end products for beneficial reuse.

Resource recovery means the extraction of useful materials or other resources from things that might otherwise be waste, including reuse, recycling, reintegration, regeneration or other activities. This includes the collection, handling, and processing of food and organic waste for beneficial uses.

Beneficial use means the use of recovered food and organic waste to recover nutrients, organic matter, or moisture to improve soil fertility, soil structure, or to help build soils where they do not exist.

Part II: How to read the Policy Statement states: "Section 14 of the Resource Recovery and Circular Economy Act, 2016 requires amendments to official plans, zoning by-laws, other by-laws and prescribed instruments related to waste reduction and resource recovery where necessary to ensure consistency with policy statements."

Policy Statement – Targets and Recover Resources from Food and Organic Waste

The Policy Statement has policy directions and targets for each of the single-family residential, multi-residential, IC&I sectors. The following summarizes the policy's diversion percentage targets and timelines of food and organics by each sector's generator of relevance to municipalities:

- Municipalities that provide source separated food and organic waste collection shall maintain or expand these services to ensure residents have 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 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 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.
- 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.**

In April 2018, the Ministry of the Environment and Climate Change (since changed to the Ministry of the Environment, Conservation and Parks - MECP) released Ontario's Food and Organic Waste Framework. The Framework document identified 17 action items focused on reducing the quantity of compostable organic materials being directed to disposal facilities. Most notable was the identification of the year 2022 as an anticipated start date to phase in a potential organics disposal ban in the Province of Ontario.

Policy Update

To date, the MECP has not updated the timeline nor consultation on the proposal organics landfill ban; however, on September 30, 2020, the Minister announced that the provincial government is consulting on the expansion of materials that should be collected in green bins. The Ontario government is currently seeking public input on its proposal to reduce the amount of food and organic waste going to landfills. Proposed amendments to the Food and Organic Waste Policy Statement would clarify and expand the types of materials that should be collected by municipalities in green bins and encourage innovation in the processing of compostable products.

Proposed changes to the policy statement would:

- Clarify and expand the types of materials that may be collected in municipal green bins and other collection systems, including certain compostable products and packaging such as certified compostable coffee pods.
- Support consumers and businesses in making better decisions about packaging and food waste and spur innovation in the management and processing of compostable products, for example, through technology updates, research, and piloting.
- Reduce waste from going to landfill.

The province is also working with municipalities, businesses and institutions to identify ways they can improve the tracking and reporting of their efforts to meet waste reduction and diversion targets.

4.3.2.2 Circular Economy and Zero Waste

One of the important components of the new Waste Free Ontario Act is the declaration of 17 specific "provincial interests" (Part 1 of the Act) that serve as the framework for policies to be developed by the Ministry of Environment, Conservation and Parks (MECP). These "interests" are consistent with circular economy and zero waste thinking including:

- Minimize greenhouse gas emissions;
- Increase the durability, reusability and recyclability of products and packaging;
- Minimize the need for waste disposal;
- Increase the reuse and recycling of waste across all sectors of the economy; and
- Hold persons who are most responsible for the design of products and packaging responsible for the products and packaging at the end of life.

On November 29, 2018, the Minister of the Environment, Conservation and Parks presented its government's "Made-in-Ontario Environment Plan". This new plan retains a circular economy perspective and outlines four main areas of environmental action:

- Help protect our air land and water;
- Address litter and reduce waste;
- Support Ontarians to do their share in reducing GHGs; and,
- Help communities and families prepare for climate change.

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). In the area of reducing waste (and addressing litter), two specific actions were identified:

- **Reduce plastic waste** by: working with other provinces/territories and the federal government to develop a waste strategy to reduce plastics waste including micro plastics to lakes and rivers (e.g. include the Great Lakes national/international agreements) and improve national standards that address recyclability and labelling for plastic products and packaging to reduce the cost of recycling.
- Make producers responsible for the waste generated from their products and packaging by moving Ontario's existing waste diversion programs to the producer responsibility model. This will provide relief for taxpayers and make producers of packaging and products more efficient by better connecting them with markets that recycle what they produce. Individual producer responsibility is a cornerstone of this plan.

4.3.2.3 Producer Responsibility

On June 1, 2016, the Ontario Legislature passed Bill 151, the Waste-Free Ontario Act, 2016[1] (WFOA). WFOA replaced the Waste Diversion Act, 2002 (WDA) with a new producer responsibility framework that makes producers individually responsible and accountable for their products and packaging at end-of-life. Under this regime, producers become directly accountable for recovering resources and reducing waste as required by regulation. WFOA set a new course for waste diversion in Ontario and this new course is resulting in changes in the way local and regional municipalities in Ontario may deliver some waste management services in the future.

In addition to the transition of the Blue Box Program to a regime of Individual Producer Responsibility (IPR), three other material programs were selected for transition prior to the Blue Box Program: Used Tires, Waste Electrical & Electronics Equipment (WEEE) and MHSW. The Blue Box Program transition is expected to be the most complex and time-consuming. The transition of Used Tires, WEEE and MHSW is in different stages of progress or completion.

Blue Box Program

For the last several years, there has been discussions and movement towards full producer responsibility for the Blue Box program in Ontario. On August 15, 2019, the Minister of the Environment made a three-part announcement to "Improve Recycling and Tackle Plastic Waste."[3] First, to move Ontario forward immediately by issuing direction to Stewardship Ontario (SO) outlining the next steps and timelines to transitioning the program to producer responsibility, starting in 2023. Secondly, over the

[3] https://news.ontario.ca/ene/en/2019/08/ontario-announces-next-steps-to-improve-recycling-and-tackle-plastic-waste.html

coming year, to begin consultations and develop regulations to support the new producer responsibility framework. And thirdly, to work with municipalities to begin transferring responsibility for their programs to producers starting January 1, 2023 with complete transfer finished by December 31, 2025. The following schematic (Figure 3) presents the timeline for the Blue Box Program transition.

Figure 3: Timeline for the Blue Box Program Transition

The MECP subsequently undertook a process to develop the new Blue Box regulations under the RRCEA. Municipal input was coordinated through the Association of Municipalities of Ontario (AMO) and the Municipal 3Rs Collaboration (M3RC). Municipalities were also requested by AMO to pass Council resolutions indicating their preferred timing to transition the blue box program to IPR. Municipal (and joint) working group meetings were scheduled by MECP staff through to July 2020 to address issues such as: the scope of producer responsibility under the new regulations; common collection system considerations; transition and target issues; and other core policy components.

On October 19, 2020 the MECP announced its proposed producer responsibility regulation for the new Blue Box system in Ontario. The proposed regulation makes producers responsible for providing collection services to local communities, managing blue box materials, and establishing targets to increase diversion rates, tackle plastic waste and protecting the environment. The MECP is consulting with stakeholders and accepting feedback until December 3, 2020, before finalizing the regulations by early 2021.

The proposed regulation identifies the producers responsible for the scope of blue box designated materials that must be diverted and enables the producers to contract with producer responsibility organizations (PROs) to meet their blue box regulatory requirements. The proposed regulation would include printed paper, packaging, and non-alcoholic beverage containers, and expand collection requirements to include the following additional materials commonly put in blue boxes by residents: Unprinted paper;

- Single-use packaging-like products, such as foils, wraps, trays, boxes, bags; and
- Single-use items relating to food and beverage products such as straws, cutlery, plates, stir sticks.

The proposed regulation under the RRCEA would:

- Maintain or improve existing blue box services, including creating one common curbside blue box collection system across Ontario;
- Expand blue box services to:
  - Communities outside the Far North, regardless of their population;
  - Additional sources, such as multi-unit residential buildings, schools, retirement homes, long-term care homes and some public spaces;
  - Make producers responsible for meeting management requirements for blue box materials, such as diversion targets.

The proposed regulation would not:

- Impact existing deposit return initiatives operated for alcohol beverage containers; and
- Require producers to provide blue box services in the IC&I sectors (beyond additional sources mentioned above).

As noted earlier, this process will culminate with transitioning the existing Blue Box Program from January 1, 2023 to December 31, 2025 to a full producer responsibility regulatory framework. The proposed regulation lists BASWR transitioning in the last year (2025).

Potential Impact of Transition to IPR for Blue Box PPP

There are a number of issues to be considered and resolved over the next few months regarding the details of the final regulation for Ontario's new Blue Box and its transition to IPR for Printed Paper and Packaging (PPP) materials. All stakeholders have an opportunity to participate in these discussions. As noted above, AMO and M3RC are actively working together to represent and communicate municipal interests with regard to critical Blue Box Program issues. What follows below is a brief assessment of some of the most important issues that the AMO, MECP and producers are working to address through the new regulations.

1. Multiple PROs and Program Plans.

IPR under a new Blue Box Regulation can be expected to look quite different as compared to the current Blue Box system in Ontario. It is not yet known what framework will be used, through which producers will be obligated, and therefore whether there will be any conditions in place for municipal participation. The new blue box program plan would be written by the producers and approved by the MECP through RPRA.

Based on the experience to date with the Ontario tire program (the first program in the province to transition), it is possible (if not likely) that more than one PRO will be formed for PPP. Ontario municipalities are not expected to have a right of first refusal; but, there might be competing offers from more than one PRO for PPP materials. Competing PROs for PPP would likely change the Blue Box Program in Ontario significantly.

2. Targets and Transition

The issue of setting targets - both their granularity (e.g. for different types plastics for example) and the level (how much of a "reach" will new targets require?) - are critical issues to be considered as part of the new Blue Box regulatory development process for PPP materials. The current BC EPR system for PPP is based on a province-wide collection target. The current Ontario Blue Box system reports (through RPRA) on recyclable materials marketed. AMO and M3RC recommended a "European-style" of new reporting where recycling activities are based on what is utilized back into new products (discounting process losses and contamination).

Targets that are sufficiently aggressive (and increasing over time) can be an incentive under a new IPR program for producers to expand services beyond what is currently offered. The new system should support continuous improvement and innovation. No targets should be in place during the "transition phase", with the first set of targets planned for 2026, with more aggressive goals planned for 2030. The list of materials accepted should be consistent across the province and expanded to meet resident expectations.

Program transition will occur over the 2023-2025 period.

3. Materials and Sources for PPP

One of the keys to the success of BC's transition to full EPR for PPP over 5 years ago was the decision to select a broad and common set of materials for recycling across the province. The decision by Recycle BC, the non-profit organization responsible for PPP in BC, to have glass collected separately, was a challenge for many existing curbside programs. The decision to have polystyrene foam and plastic film (and glass in some places) collected through (staffed) depots was built on a pre-existing and wide network of drop off centres that were already in place to collect deposit beverage containers and other obligated products in BC, such as computers, paint and household hazardous wastes. A similar staffed drop off network could be a challenge to replicate in Ontario since the current LCBO/Beer Store beverage deposit programs in the province are quite limited in scope.

AMO and M3RC are both supporting an expanded and common set of materials for Ontario across the province. They also called for a long list of eligible sources for collection – e.g. including seasonal households, senior and long-term care residences, schools, depots at landfills, public spaces and campgrounds. Producers will suggest restricting the inclusion of new sources. In BC, pressure from regional municipalities - especially in less populated areas - to include small business and "packaging-like" materials in the new 5 year contract signed by Recycle BC in June last year - were rejected by BC's Ministry of the Environment and Climate Change Strategy. Producers can be expected to take a similar position in Ontario regarding expanding eligible sources with the new Blue Box regulations.

4. Individual producer responsibility

Individual producer responsibility means that producers are responsible for the "cradle to grave" management of their products and packaging. This is not achieved by just meeting recycling targets. AMO and M3RC proposed that obligated products and packaging such as pizza boxes and paper towels that can and are being managed through organics treatment programs in Ontario should be included as part of Producers funding obligations. Recycle BC has begun work with a number of regional districts to track obligated materials in the organics stream. Similar work could be undertaken in Ontario to lay the ground work for producers paying their share for this organics processing treatment option.

"Extended" producer responsibility should also apply to littered obligated materials and –in the longer term – for obligated materials that end up being managed at municipal landfills. Both of these options have been considered in Europe (especially the litter issue), but so far, no action has been taken (although the Single-Use Plastics Directive will have an impact in the near future).

Producer funding for the cost of managing obligated PPP at municipal disposal facilities, i.e. landfills, is becoming more important as food producers continue to shift from recyclable packaging to non-recyclable plastic packaging (e.g. stand-up pouches). While there may be lifecycle environmental benefits associated with this shift in packaging formats, financial mechanisms are still needed to incent producers to develop recyclable plastic food packages that can be added to the PPP recycling program.

5. Reporting

Reporting on the new Blue Box system's performance against targets is a primary function of RPRA. In BC, reporting on the performance of all 22 of the province's EPR programs is supported by two "local actions". First the BC Stewardship Council (an informal consortium of BC's PROs) funds and conducts regular waste audits in host municipalities to help track "what's being missed". A similar exercise might be considered in the future for Ontario. The second local action that has evolved in BC is establishing (and enforcing at them local level) a variable range of landfill bans. Two of the most progressive regional districts in BC (i.e. in terms of aggressive waste diversion) are Metro Vancouver and the district of Nanaimo. Both have a long list banning – among other things – the disposal of EPR obligated materials (including PPP).

These types of activities underscore the importance in Ontario of on-going municipal engagement, watch-dogging and reporting at the local level to make sure the "new" IPR programs for PPP (and other obligated materials) optimizes material diversion from landfill.

4.4 County

In addition to policy and legislation at the Federal and Provincial levels, the County has also developed a policy framework and plans to support and guide the provision of waste management services including the following:

- Solid Waste Management Master Plan; and

- County Bylaws No. 3544, No 3545 and No. 3546.

4.4.1 Bruce County Solid Waste Management Master Plan 1995

The County of Bruce completed a Solid Waste Management Master Plan in 1995. The plan provided a comprehensive strategy for diverting waste and for the efficient use of existing landfill capacity. The responsibility for the implementation of the plan and the administration of the system is shared between the County and the local municipalities. The County passed by-laws to assume waste management responsibilities and to adopt the Waste Management Plan. In addition, in 2015 a Strategic Plan / Operational Review was completed by the County.

4.4.2 Bylaws No. 3544, No 3545 and No. 3546

The responsibilities of the County with respect to solid waste management as outlined in each of the three bylaws are summarized in Table 3.

Table 3: County Responsibilities as Outlined in Bylaws

Category	Responsibility
Diversion	• Waste reduction education • Household hazardous waste collection program • Monitoring of the progress towards the County-wide target of 50% diversion
Disposal	• The County can facilitate agreements between local municipalities for the use of existing landfill capacity for all municipalities • Establish a Waste Management Future Planning Reserve Fund to pay for future County waste disposal requirements • Assume responsibility for waste disposal education, including the exploration of alternative disposal facility operators in the County • Monitor capacity and operations of existing sites

4.5 Arran-Elderslie

CleanFarms Inc., a non-profit environmental stewardship organization that operates permanent collection programs for agricultural plastics throughout Canada and Arran-Elderslie are currently completing a pilot program together. The pilot program involves the collection of agricultural plastic waste for farmers. The intent of the program is to build a collection model that will be practical for farmers, cost-effective and that may eventually be replicated in other Ontario regions. This projects is currently funded by CleanFarms and the Agricultural and AgriFood Canada's Canadian agricultural strategic priorities program.

5.0 Existing Waste Management System

5.1 Roles and Responsibilities

The following is a high level summary of obligations and roles and responsibilities of Bruce County, BASWR, the municipalities and community groups.

5.1.1 Bruce County – Upper Tier

The responsibilities of county governments are generally limited to the following: maintenance and construction of rural arterial roads, health and social services, and county land use planning. Bruce County's specified responsibilities with respect to solid waste management responsibilities, as defined by three bylaws, were previously presented in Table 3.

The responsibilities for waste management between the County and local municipalities is outlined in the County of Bruce Master Plan completed in 1995. The County reviewed these responsibilities during the Strategic Plan / Operational Review in 2015. At that time, there was no further recommendations for the County to take on a greater role in waste management.

The County's website provides information regarding the County's program – MHSW and includes high level information regarding the waste management programs in each municipality and links to the municipal waste management pages.

5.1.1.1 Bruce County Waste Management Technical Sub-Committee

The Waste Management Technical Sub-Committee is established by the County of Bruce as a working group, and reports to individual municipalities and to County Council through the Highways Committee. Committee members are composed of one staff member designated by the local councils, a member of BASWR and the County Engineer. It is chaired by the Director of Transportation & Environmental Services for Bruce County.

The purpose of the sub-committee is for local municipalities and the County of Bruce to convene and discuss information regarding current waste management practices and initiatives and to collaborate on issues regarding future waste management programs.

The Sub-Committee is guided by a terms of reference (revised in 2009). Its objectives are to:

- Understand all aspects of the Bruce County's waste management system;
- Coordinate waste management strategies between local municipalities and the County;
- Investigate new opportunities and technological innovations for waste management systems;
- Provide up-to-date information on available waste disposal and diversion programs; and
- Assist municipalities in meeting current legislative and regulatory requirements.

Some of the responsibilities of the sub-committee is to review the landfill site fill rates, the overall municipal fill rates, review diversion programs within each municipality, review annual status reports on waste management for Bruce County and oversee the delivery of the MHSW program throughout the County.

5.1.2 BASWR – Not for Profit Organization

Bruce Area Solid Waste Recycling is a not-for-profit organization. The partnership was established by its member municipalities. In 1989, the Towns of Port Elgin and Southampton, along with the Township of Saugeen formed a committee to look at the feasibility of recycling. In 1990, Bruce Area Recycling was created and added the Towns of Kincardine, Walkerton and Wiarton, the Villages of Hepworth and Lucknow to its membership. BASWR's MRF recycling plant is located at the Southampton landfill site and was completed in November 1990. Bruce Area Recycling currently services 87% of Bruce County. There is one agreement in place with BASWR with South Bruce Peninsula, Kincardine, Arran-Elderslie, Huron-Kinloss, Saugeen Shores, South Bruce and Brockton. The agreement with BASWR can be dissolved by a majority vote by members of the Board.

For rural areas, depot systems are popular and cost effective. BASWR also places drop points at alternate locations besides the closest landfill site to add convenience and shorter travel distances. Urban areas receive curbside collection and BASWR's collection staff provide customer service to the residents they collect from.

BASWR was initially created to provide recycling collection and sorting; however, they also partner with some municipalities to collect curbside garbage streams. More information on these partnerships is included in Section 5.2.3.

IC&I and multi-residential customers require special containers for the high volumes of material they generate. These containers are also used for seasonal collection points such as campgrounds and other tourist areas BASWR has retrofitted collection vehicles to collect plastic carts, which are offered in 95 and 65-gallon capacities which are used in all municipalities that BASWR services. The MIC may consider investigating the benefits and draw-back of wheeled carts as seen in Wellington and Perth County.

5.1.2.1 Promotion and Education

BASWR designs and issues yearly collection calendars, which are specific to each municipality. The calendars also provide quick reference to recycling procedures and collection days. BASWR produces a Blue Box information sheet for proper sorting reference for residents. The info sheet is located on the "Bruce Recycling" website[4] for download) as a PDF file. BASWR also attends schools and talk about recycling to students. BASWR also provides student tours at their MRF facility.

[4] www.brucerecycling.com/what-can-i-recycle

5.1.3 Municipalities – Lower Tiers

The responsibilities of the municipalities with respect to solid waste management as outlined in Bylaw 3544 are summarized in Table 4.

Table 4: Municipal Responsibilities as Outlined in Bylaw 3544

Category	Responsibility
Diversion	• Responsible for recycling, composting, tipping fees, exchange facilities, data collection, monitoring & reporting
Disposal	• Garbage collection & disposal • Existing landfill ownership, operation, management, closure and post closure of existing landfill sites
Planning	• Provide information to the County upon request

Lower-tier municipalities (cities, towns, villages, townships) within counties typically provide the majority of municipal services to their residents. Municipalities also have their own municipal bylaws that may include the responsibilities of the municipality and/or residents. These are listed in Table 5 and in Section 5.2 in the subsections pertaining to each municipality. .

Table 5: Municipal Bylaws

Municipality	Municipal Bylaws
Arran-Elderslie	• 62-09 Comprehensive Zoning By-Law • 2019 Fees By-law, 2020 Fees By-Law
Brockton	• 2010-33 Bylaw to Adopt Policy – Clear Garbage Bags • 2019-163 Amend 2020 Fees and Charges By-Law • 46-99 By-law to authorize the Agreement for the Joint Operation and Management of Bruce Area Solid Waste Recycling (1999)
Huron-Kinloss	• 2011-09 Waste Management By-Law Amendment
Kincardine	• 2019-123 Property Standards By-Law • 2019-124 Clean and Clear Yards By-Law • 2004-177 and updated 2019-143 By-Law to Enter into an Agreement for Residential and Commercial Refuse Collection within the Municipality of Kincardine and Commercial Cardboard Collection Within Ward One
Northern Bruce Peninsula	• 2013-74 Waste Management By-Law
Saugeen Shores	• 39-2008 Waste Disposal By-Law
South Bruce	• 2019-52 Fees By-law • 2016-16 Contract for Services Agreement – Curbside Garbage Collection

Municipalities provide landfill disposal services to residential, IC&I and some commercial and demolition (C&D) sectors. Municipalities own and operate their non-hazardous municipal solid waste landfills. Some manage up to three active sites. In addition, there are landfill sites that are closed, but must be monitored per MECP regulations. Various materials for diversion are accepted at depot type drop offs,

typically located at landfill sites, with some depot bins located throughout communities. Some accept brush and leaf and yard waste for burning or landfill cover.

Municipalities manage their curbside collection either by their own in-house collection service (collection vehicles, staff), through partnership with BASWR or a third party collection service provider contract. Municipalities maintain waste staff for management, operations and administrative roles. Staff address customer service calls and support educating the public. More information on the specific waste management services and approaches provided by the seven municipalities participating in this review are summarized by municipality in Section 5.2.3.

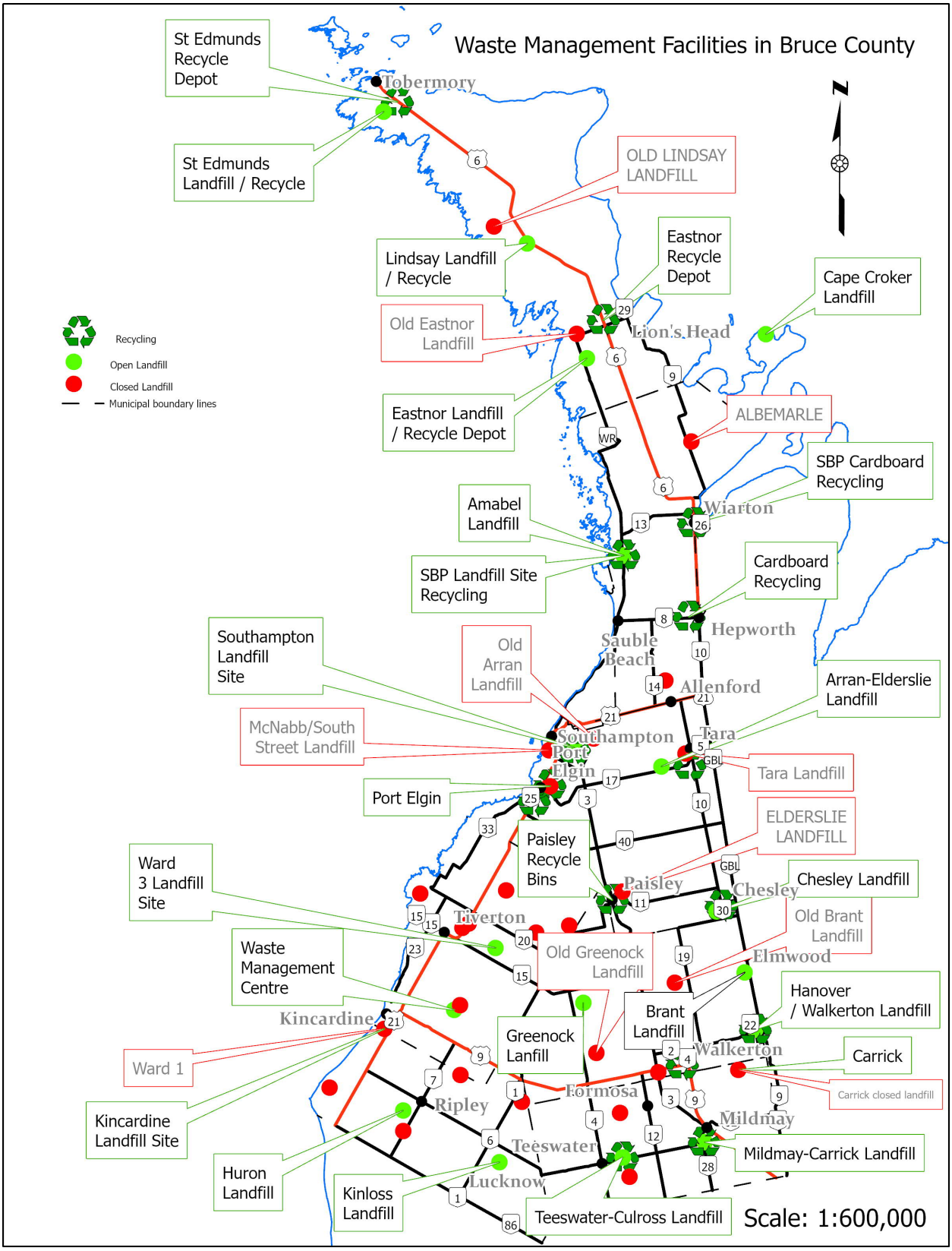
5.1.4 Community Groups

Some municipalities have active community groups or organizations that offer feedback, suggestions and volunteers regarding recycling and reuse initiatives in their communities. While these communities do not have a representative on municipal committees for waste management, they do participate in engagement and consultation activities. An example of their involvement is the initiation of some plastic (film and foam) recycling programs, currently not offered by BASWR. More information in community groups when noted during municipal interviews are included in Section 5.2.3.

5.2 Service Performance

The following sections provide a high level overview of waste management service performance based on the most recently available data. Figure 4, provided by Bruce County, shows a system wide map of landfills in Bruce County including active, closed and mothballed landfills. Note that the one MRF recycling facility in the County operated by BASWR is located at the Southampton landfill site. Sections 5.2.1 to 5.2.3 presents service performance summaries for Bruce County, BASWR and each municipality.

Figure 4: Waste Management Facilities in Bruce County



5.2.1 Bruce County

Since 2007, Bruce County has prepared an annual status report on waste management which outlines current waste management practices, landfill site capacity and opportunities for enhancing the waste management system. The most recent Status Report on waste management available at the time of this review was 2018 (dated November 2019). Bruce County reports that in 2018, County landfill sites had a combined fill rate (i.e., amount of waste and daily cover disposed) of 64,289 m^3 and a five year average annual fill rate of 58,106 m^3. Overall, the remaining landfill site capacity at the end of 2018 is estimated to be 2,040,705 m^3, and when applying the average fill rate, there is approximately 35 years remaining of landfill capacity in the County.

The recent annual status report notes that "overall, the County has sufficient landfill site capacity available to meet their long-term waste management planning needs." In 2018, the total waste and daily cover disposed at the municipal landfill sites was 13% more compared to the 2017 fill rate of 57,100 m^3 and 11% greater than the five-year average fill rate of 58,100 m^3 reported. The report also indicates that fluctuations in annual fill rates may be due to decreased/increased waste generation, increased waste diversion practices, improved waste compaction and other operational improvements, and methodologies in completing topographical surveys. Dillon calculated the annual percent change from 2015 to 2018 in fill rates to be a 4% increase year-over-year as per Table 6. Since 2015, the fill rates per year are trending upwards, rather than fluctuating positively and negatively. It is estimated that the remaining capacity is 31.7 years if 2018 fills rates remain constant and not change for the next 35 years.

Table 6: Landfill Fill Rates

Year	Fill rate (m^3/year)	Annual % Change
2014	55,410	
2015	52,198	-6%
2016	53,361	2%
2017	57,113	7%
2018	64,289	13%
Average 5 years	56,474	4%

A variety of waste diversion programs are offered by each municipality and current diversion programs include the following, noting that not all municipalities offer each program:

- Blue box recycling;
- Leaf and yard waste;
- Backyard composting;
- Mattresses and box springs;
- Used tires;
- Drywall and shingles;
- Batteries;
- Electronics recycling;

- Fluorescent lights;
- Municipal Hazardous & Special Waste (MHSW);
- Reuse centres; and
- Scrap metal and white goods.

Approximately 10,973 tonnes of materials were diverted from landfilling in 2018 which is equivalent to diverting 165 kg/capita per year. The five year average as per Table 7 is 11,093 tonnes with an average 2% annual growth in diverted tonnes overall in the County.

Table 7: Diverted Tonnes

Year	Tonnes	Annual % Change
2014	10,402	
2015	10,568	2%
2016	11,169	6%
2017	12,354	11%
2018	10,973	-11%
Average	11,093	2%

Bruce County provides residents MHSW collection event services. In 2018, the County operated 16 collection events. Approximately 3,200 vehicles across the county attended the events and 160 tonnes of MHSW material was collected which is equivalent to 2.4 kg/capita per year. Five municipalities currently offer composters and/or green cones to their residents, at a cost, to encourage backyard composting.

5.2.2 BASWR

The following subsections provide an overview of BASWR's performance through the RPRA Datacall. A comparison to the County's neighbours is also included.

5.2.2.1 Datacall Diversion Rates

The RPRA annual Datacall is the standardized reporting online portal managed by RPRA, formerly Waste Diversion Ontario (WDO). Over 250 municipalities and First Nations report their annual diversion tonnes and costs to receive partial funding of their Blue Box program based on a funding formula. An overall residential diversion rate percentage is calculated by RPRA using a standardized calculation protocol for all reporting municipalities. Reporting is verified and audited where necessary by RPRA. Funding is based on a three factor formula that includes tonnes diverted and program cost efficiencies. Each municipality submits their own data to RPRA. Table 8 shows the annual diversion rate for BASWR from 2016 and 2018 which ranges from 22% to 28%, when rounded.

Table 8: BASWR Diversion Rates

Jurisdiction	2016	2017	2018
BASWR	21.8%	25.7%	27.7%

5.2.2.2 Comparison to RPRA Datacall Municipal Grouping

There are nine municipal groupings that a municipality or region is categorized under based on population and population density. BASWR is categorized under Municipal Grouping #4, Rural Regional. The results for this grouping are provided below in Table 9. BASWR diversion rates ranges from 22% to 28% over a three year period, while the average diversion rates in this municipal group range from 44% to 45% over the same period, with the lowest being 32% and highest being 62%.

Table 9: Diversion Rates for RPRA Municipal Group #4

Jurisdiction	2016	2017	2018
BASWR	21.8%	25.7%	27.7%
County of Northumberland	43.3%	40.9%	39.3%
County of Wellington	39.7%	39.4%	38.6%
County of Norfolk	51.2%	-	50.7%
Quinte West Solutions	54.1%	55.3%	52.7%
County of Peterborough	49.8%	49.0%	50.3%
District Municipality of Muskoka	46.8%	46.1%	45.5%
City of North Bay	33.3%	31.7%	32.2%
City of Greater Sudbury	43.6%	44.2%	44.6%
Bluewater Recycling Association	39.2%	37.6%	33.8%
City of Kingston	60.1%	60.7%	62.4%
Municipality of Chatham-Kent	35.6%	34.9%	34.8%
City of Kawartha Lakes	39.1%	43.1%	37.5%
County of Dufferin	60.1%	57.4%	57.4%
Restructured County of Oxford	49.5%	50.7%	50.0%
Municipal Average	44.6%	44.1%	43.8%

5.2.2.3 Comparison to Neighbours

An additional approach to comparison of service performance is by geographical location comparison, i.e. neighbouring programs. Table 10 displays the diversion rate for neighbouring counties including the Municipality of Northern Bruce Peninsula, Bluewater Recycling Association (Lambton, Middlesex and Perth), and Huron County. The diversion rates ranges from 34% to 47% for neighbouring programs compared to BASWR ranging from 22% to 28% for the same period.

Table 10: Diversion Rates for Neighbours

Jurisdiction	2016	2017	2018
BASWR	21.8%	25.7%	27.7%
Municipality of Northern Bruce Peninsula	39.9%	41.9%	37.5%
Bluewater Recycling Asscoiation[1]	39.2%	37.6%	33.8%
Grey County[2]	44.1%	46.7%	40.8%

[1] Includes the counties of Lambton, Middlesex, and Perth

[2] Includes the Municipality of West Grey, Township of Georgian Bluffs, Municipality of Grey Highlands, Township of Southgate, and Town of The Blue Mountains

5.2.3 Municipal Waste Management Services Overview

The following sub-sections provides waste management information, where available, from each municipality in the service review. Information has been organized so that it is consistent when reviewing each municipality. As described in the methodology in Section 3.2, information was obtained from reports provided by each municipality and the County, as well as from the interviews conducted as part of this study and surveys from elected representatives. If there are blanks in the tables presented below, it means that no information was available or provided to Dillon.

5.2.3.1 Arran-Elderslie

The following section summarizes the information obtained through the document review and interviews with staff. It includes the following information:

- Population and households (Table 11);
- Facilities overview and operational staff (Table 12);
- Curbside collection summary (Table 12);
- Diversion services provided to residents (Table 14);
- Diversion performance and associated tonnage (Table 15); and
- 2019 waste management budget (Table 16).

Table 11: Arran-Elderslie Population, Households and ICI Businesses

Category	2017	2018	2019	3 Year Change
Population Total	7,178	-	7,173	-0.07%
Households Total	2,898	2,898	2,909	0.38%
IC&I Businesses	145	145	144	-0.69%

Table 12: Arran-Elderslie Facilities Overview and Operational Staff

Facility Type	Description
Landfill Name	Arran Landfill (ECA No. A271802)
Landfill life capacity remaining	• 58 years capacity, based on average fill rate of 3,150 m^3 per year
Operational activities	• Landfilling of residual waste and wood waste • Collection of blue box materials and e-waste • Stockpiling of scrap metal, white goods and tires
Operational Days	Thursday 8:00 am to 3:00 pm and Saturday 8:00 am to 12:00 pm
Municipalities Served	• Arran-Elderslie
Landfill Name	Chesley Waste Disposal Site (ECA No. A272402)
Landfill life capacity remaining	• Closed
Operational activities	• As of 2013, the Chesley landfill site has been closed and has not received any additional waste for landfilling • The site is approved to receive domestic, commercial and 5 percent other waste limited to scrap metal, brush, wood, construction debris and demolition debris only
Operational Days	• Site hours are every 2nd and 4th Saturday of each month from 8am to 12pm
Municipalities Served	• Arran-Elderslie
Depots	• Blue box recyclables drop-offs are available at the Chesley and Arran landfill sites • Electronic items can be dropped off for recycling at the Chesley and Arran landfill sites • Residents can drop off tires at the Chesley and Arran landfill sites • Household batteries are accepted at the Chesley and Arran landfill sites for recycling
Community Bins	• Cardboard recycling bins are located in Chesley
Transfer Stations	• Chesley landfill site (closed) is operated as a Transfer Station
Operational Staff	2 dedicated part-time staff Public works employees provide landfill compaction services and bring in fill as well as other landfill operations

Table 13: Arran-Elderslie Curbside Collection Summary

Collection Summary	Garbage	Blue Box
Service provider (contractor/in house)	Bruce Sales & Services	BASWR
Contract Years and extensions	3 Years (2019 - 2022)	
Contract End Date	September 2020	
Collection Frequency	Weekly	Bi-weekly
Bag Tags, Bin cost	$3	
Bag limits	2 bags per week (no charge) additional bags require a bag tag	
Common Complaints	Garbage not being collected	Allowable items in recycling
Bulky or Organics collection	N/A	

Collection Summary	Garbage	Blue Box
Associated Bylaws	62-09 Comprehensive Zoning By-Law 2019 Fees By-law, 2020 Fees By-Law	

Table 14: Arran- Elderslie Summary of Current Diversion Services Provided to Residents

Program	Curbside Collection	Stewardship Program	Managing Authority	End Use
Blue Box (curbside)	✓	✓ SP	BASWR	Various end markets for sorted and baled materials
Blue Box (depot)		✓SP	BASWR	Various end markets for sorted and baled materials
Electronics		✓ SP	Municipality	
Tires		✓ SP	Municipality	
MHSW/HHW		✓ SP	County	
Scrap Metal		× muni	Municipality	Local scrap dealer
White Goods/ Appliances		× muni	Municipality	Freon must be removed beforehand.
Polystyrene (PS)		× muni	Municipality	
Plastic Film		× muni	Municipality	

✓- SP – indicates that the program is a stewardship program

✓- muni – indicates the program is not a stewardship program; however, the municipality provides the service to residents

Table 15: Arran-Elderslie Diversion Tonnes and Volume 2019

Program	Collected Tonnes
Garbage Residential	2,170
Blue Box (curbside)	503.74
Metal	31
Mattresses	7.3
Total Diverted	959.17
Total Disposed	2,230
Diversion Rate (%)	20%

Table 16: Arran-Elderslie Waste Management Budget 2019

Budget Item 2019	Revenue	Expenditure
Collection Garbage	$293,676	$151,900
Landfill Operations	$99,3423	$113,184
Recycling	$2,720	$81,100
Total	$395,739	$346,184

Strengths and Challenges

The following table (Table 17) highlights the strengths and challenges with respect to waste management that were discussed with municipal representatives during the interviews.

Table 17: Arran-Elderslie Waste Management Strengths and Challenges

Strengths	Challenges
• Landfill operations working well and staff are content with it • Part time staff working well; positive feedback from public on staff • Landfill has a scale and computer system • Landfill capacity has 60 years left, when used for the municipality's own use • Mayor and Council members open to improvement changes • Open to idea of shared recycling resources with other municipalities • Few seasonal households, approximately 10 households at Arran Lake • Bag limit of 2 bags weekly; additional bags are $3.00 • Garbage bag weight allowance is 40 pounds (18 kg) max each; • No lineups at landfill entry • Compost pile at Chesley site is taken away by local farmer through a "handshake deal" • Arran site has in-ground collection pipes and stormwater collection pond; leachate pipes for the new cells	• Small rural population and limited resources • No bag tags for first two free bags • Landfill open 1.5 days per week (Thurs, Sat) • No building at landfill site for staff • Have a packer, need a loader • Unpaved road at landfill • Would like to use landfill for their own use; not other municipalities • BASWR uncertainty with the future Blue Box program • BASWR collection tonnes (depot and curb) not supplied to municipality • BASWR curbside collection is bi-weekly • No cardboard collected curbside • Compost pile at Arran site is very small; not used • No measurement of Chesley compost pile tonnes available • Asphalt shingles have no end market; use on site for roads • No known waste audits in at least six years or more • Burn brush and wood at Chesley site • Garbage contract with MEI (Multiple Enterprises Inc.) Bruce Services; two extensions to existing contract; no tender • Chesley site has only weeping around the perimeter and drainage into a lagoon

During the study input from Elected Officials was also provided. This has been included in Table 18.

Table 18: Arran-Elderslie Elected Official Input

Elected Official	Input
1	• One goal of the study is to provide options/opportunities for waste diversion. Styrofoam is an example of an item currently in landfill that could be diverted. Prolonging landfill lifespan is a priority. • Clear bags, one bag per household, more items included in recycling program could be considered. • Neighbouring municipalities, Georgian Bluffs and Chatsworth, own and operate a Bio-Digester that should be looked into if we could feed its input with material waste streams. • Could more items be grinded or compressed? Could more items be salvaged or reclaimed? Could items at the landfill be processed to a Biofuel? • Use landfill attendants, along with management, as a resource as they have great input also. • A regional landfill that would take materials from larger municipalities to smaller ones, like Arran-Elderslie, would be unacceptable.
2	• The goal of the study should be to see a focus on improving our environmental impact. Guelph has an intense sorting program for waste, raw materials and recyclables. There are likely ways to convert waste into energy that could be explored. Raw materials used for producing single use plastics should be taxed at the source, perhaps generating revenue for financing back to municipalities for plastic waste management. • One of the challenges that comes up repeatedly is the misuse of waste management programs. Paisley no longer has a brush or compost pile. Misuse is stated as the reason. There are items in the cardboard bins that are not permitted; contamination. How much does it cost to sort through misplaced items? • One of the current challenges we are facing is the increased use of plastic due to COVID (e.g. grocery bags, etc.). The increased use of PPE, especially single use items such as masks, will continue to impact our waste management system. The increased use of take-out containers in restaurants and the bubble wrap from Amazon online shopping is another concern arising from COVID. • Currently unaware of what is working well. That could mean that no news is good news. • More education is needed for the general public. More information about what, why and how to reduce waste is needed. For example, clear graphics posted at the cardboard bin recycling would be helpful. Incentives for reducing waste could be beneficial (e.g. compost bins provided at a minimal cost). • Shared services for Waste Management could be beneficial. (e.g. a County shared bio-digester)

5.2.3.2 Brockton

The following section summarizes the information obtained through the document review and interviews with staff. It includes the following information:

- Population and households (Table 19);
- Facilities overview and operational staff (Table 20);
- Curbside collection summary (Table 21);
- Diversion services provided to residents (Table 22);
- Diversion performance and associated tonnage (Table 23); and
- 2019 waste management budget (Table 24).

Table 19: Brockton Population, Households and IC&I Businesses

Category	2017	2018	2019	3 Year Change
Population Total	9,467	9,479	9,488	0.22%
Households Total	4,255	4,257	4,273	0.42%
IC&I Businesses	138	138	137	-0.72%

Table 20: Brockton Facilities Overview and Operational Staff

Facility Type	Description
Landfill Name	Greenock Landfill (ECA No. A272501)
Landfill life capacity remaining	52 years capacity remaining using annual fill rate over previous 5 years (1,836 m^3/year) and 32 years capacity remaining using maximum fill rate (1,836 m^3/year)
Operational activities	Landfill services for the residential and IC&I sectors and currently acts as a transfer station. Waste collected at Greenock landfill is transferred to the Brant landfill
Operational Days	8:00 am to 4:00 pm on Saturdays
Municipalities Served	Services areas within the former Township of Greenock in the Municipality of Brockton
Landfill Name	Hanover/Walkerton Waste Disposal Site (ECA No. A271901)
Landfill life capacity remaining	The former 'existing landfill' area of Hanover/Walkerton Waste Disposal Site reached landfill capacity in 2015 and was capped by Cedarwell Excavating in September 2015. The 'expansion area' (which consists of Cell 1 and Cell 2) is estimated to have capacity for 27 years (2047) based on the total approved capacity for expansion, using the three-year average volume (12,608 m^3).
Operational activities	Landfilling of waste within Cell 1 continued throughout all of 2019. The development of the site was reviewed with landfill staff in the summer of 2019 with grades and fill limits for Cell 1 staked in the field. As part of this review, it was determined that the Cell 2 expansion area located west of Cell 1 will need to be constructed in 2020 in order to have it ready for landfilling by the end of 2020.
Operational Days	Effective May 1st, 2019, the landfill reduced the hours of operation from five days to four days a week. The site is now open Tuesday and Thursday to Saturday from 8:00am to 3:00pm. The site is closed on Statutory Holidays.
Municipalities Served	The Site services an area comprised of the Town of Hanover and former Town of Walkerton (now part of the Municipality of Brockton).
Landfill Name	Brant Landfill Site (ECA No. A271902)

Facility Type	Description
Landfill life capacity remaining	5.5 years for Area B and 14.3 years for Area C
Operational activities	Receives residential and IC&I waste. In 2016, the landfill also started receiving diverted waste from Greenock Landfill (residential and ICI). Condition 41 of the C of A, the burning of clean wood and brush is allowed
Operational Days	It is open 3 days a week from April to November and two days a week the rest of the year. It is always open on Wednesday and Saturday.
Municipalities Served	Residents of the former Township of Brant
Depots	Recycling Depot (Walkerton) at the MTO Yard on Kincardine Hwy 9: This is a drop-off location only. • 12 x Cardboard Bins (8yd) picked up 2 times per week (Monday and Thursday) by BASWR • 2 x 8yd Bale Wrap/ Plastic Wrap/ Plastic Bag bins – picked up as needed • 3 x Canada Diabetes Bins – emptied weekly • EPS Styrofoam Drop Off – location provided under a transport trailer • Scrap Metal Drop Off – Mostly Saturdays • E-Waste Drop Off – Mostly Saturdays • Battery Drop Off – Mostly Saturdays "Mostly" means that on Saturday mornings there is an agreement with the local Community Living Organizations to staff the area to handle drop offs. Otherwise, residents leave stuff at the door or catch staff at the facility when they are there doing other things. This is also the location where the EPS Styrofoam Cold Press Densification machine is located that is a joint venture between Brockton and the Town of Hanover.
Transfer Stations	Greenock Landfill includes a transfer station. Waste is collected on Saturdays in bins and the bins are transferred by Trash Taxi to the Brant Landfill for disposal.
Operational Staff	3 landfill attendants. Public works staff operate packer and dozer at Brant Landfill for 5 to 6 hours per week.

Table 21: Brockton Curbside Collection Summary

Collection Summary	Garbage	Blue Box
Service provider (contractor/in house)	Bruce Sales & Services	BASWR
Contract Years and extensions	Long-term service agreement	
Contract End Date	Long-term service agreement	
Collection Frequency	Weekly	Bi-weekly
Bag Tags, Bin cost	$2 bag tag	
Bag limits	The maximum weight per bag is 40 pounds (18 kg)	
Clear Bag Policy	Clear bag policy enacted in 2010, allows use of 1 privacy bag	
Common Complaints	• Small list of items that are collected, leads to no pickups • Bag Tag Fee • Landfill not open enough • Residents still using black bags	Small list of items that are collected, leads to no pickups

Collection Summary	Garbage	Blue Box
Bulky or organics collection	N/A	
Associated By-Laws	2010-33 Bylaw to Adopt Policy – Clear Garbage Bags 2019-163 Amend 2020 Fees and Charges By-Law 46-99 By-law to authorize the Agreement for the Joint Operation and Management of Bruce Area Solid Waste Recycling (1999)	

Table 22: Brockton Summary of Current Diversion Services Provided to Residents

Program	Curbside Collection	Stewardship Program	Managing Authority	End Use
Blue Box (curbside)	✓	✓ SP	BASWR	Various end markets for sorted and baled materials
Blue Box (depot)		✓SP	BASWR	Various end markets for sorted and baled materials
Electronics		✓SP	Municipality	
Tires		✓SP	Municipality	
MHSW/HHW		✓SP	County	
Scrap Metal		✓SP/muni	Municipality	Local scrap dealer
White Goods/ Appliances		×muni	Municipality	Freon must be removed beforehand
Polystyrene (PS)		✓SP/muni	Municipality	
Plastic Film		✓SP/muni	Municipality	

✓- SP – indicates that the program is a stewardship program and/or all costs are covered by the stewardship program

✓- SP / muni – indicates that the program costs are covered by the stewards and the municipality

x- muni – indicates the program is not a stewardship program; however, the municipality provides the service to residents

Table 23: Brockton Diversion Tonnes and Volume 2019

Program	Collected Tonnes
Garbage Residential	3,136.14
Construction Segregated	95.6
Blue Box (depot)	249
Blue Box (curbside)	198.23
LYW & Brush	370.6
Electronics	29.68
Tires	30.98
Scrap Metal	121.06
Plastic Film	2.8
Total Diverted	1,098
Total Disposed	3,136
Diversion Rate (%)	26%

Table 24: Brockton Waste Management Budget 2019

Budget Item 2019	Budgeted or Actual $
Expenses:	
Collection Garbage	
Collection Blue Box	
Landfill Operations	
Brant and Greenock Landfill	$300,734
Hanover/ Walkerton Landfill	$523,770
Capital Expenses	
Brant and Greenock Landfill	$75,000
Hanover/ Walkerton Landfill	
Revenues:	
Tipping Fees Landfill	
Brant and Greenock Landfill	$171,260
Hanover/ Walkerton Landfill	$351,750
Diversion Materials Sale	
Bag Tags	$153,000
Operating Reserve	$75,000

Strengths and Challenges

The following table (Table 25) highlights the strengths and challenges with respect to waste management that were discussed with municipal representatives during the interviews.

Table 25: Brockton Waste Management Strengths and Challenges

Strengths	Challenges
• Sharing information resources and experience with other municipalities • Good relationship with neighbouring municipalities • Few seasonal households (approx. 300 households) • Clear bag policy; no black bags accepted • Open to suggestions for improvements and change • Interest in composting program, focused on more urban areas • Fully compliant, good inspections coming back from the MECP • Good staff at landfill • Waste curbside services • Piloted a densifier machine for polystyrene • Has a local Environmental Committee whom generates ideas • Own municipal initiative (not BASWR) to collect polystyrene and plastic film; saves landfill space,	• Three landfills to manage, two are active. Carry over from pre-amalgamation • Only one landfill (Brant) with a scale • Limited landfill open hours • ECAs limit use of landfill to its own residents • Contract (50/50 costs) with Town of Hanover managing the Walkerton landfill site, but they only add estimated 40% of tonnes i.e. unbalanced cost distribution • Large costs yet inefficiencies in waste management • Some winter issues with curbside collection • Strong political resistance to increase bag tag price • No formal composting program nor process. Composted LYW and brush used as landfill cover. • Do not collect as many recyclable material types compared to other municipalities outside the County • BASWR's much higher costs in 2019 and 2020, Blue Box markets fading

Strengths	Challenges
reduces windblown litter and the public asked for this program • Economic growth in area; approximately 500 new units in next five years • No immediate challenge on landfill capacity, may become more pressing in 5-10 years • Waste management plans and service review studies: o Municipal Services Review (2017) o Long-Term Waste Management Plan Former Townships of Brant and Greenock Municipality of Brockton (2014) o Waste Management Evaluation Study for the Hanover Walkerton Waste Disposal Site (2005)	• BASWR gave 24-hour notice when stopped collection during Covid • Uncertainty and direction from BASWR regarding Blue Box program transition to EPR • No bale wrap program • No MHSW depot. Only two events per year • Polystyrene collection and densifier machinery pilot. Storing currently as transportation cost too high for shipping polystyrene to end markets (Niagara or Sherbrooke)

5.2.3.3 Huron-Kinloss

The following section summarizes the information obtained through the document review and interviews with staff. It includes the following information:

- Population and households (Table 26);
- Facilities overview and operational staff (Table 27);
- Curbside collection summary (Table 28);
- Diversion services provided to residents (Table 29);
- Diversion performance and associated tonnage (Table 30); and
- 2019 waste management budget (Table 31).

Table 26: Huron-Kinloss Population, Households and Businesses

Category	2017	2018	2019	3 Year Change
Population Total	7,118	7,169	7,226	1.52%
Households Total	4,067	4,107	4,037	-0.74%
Households Permanent			2,777	
Households Seasonal			1,260	
IC&I Businesses			240	

Table 27: Huron-Kinloss Facilities Overview and Operational Staff

Facility Type	Description
Landfill Name	Huron Landfill
Landfill life capacity remaining	The estimated landfill closure date remains 2030 based on the remaining airspace of 91,810 m^3 and annual airspace usage of +9,000 m^3/year.
Operational activities	Segregated brush, lumber and clean wood may be burned at the site. Scrap metal and white goods are stockpiled in the southeast area of the site. Tires are segregated and stockpiled west of the scrap metal pile. E-waste is segregated and stockpiled beside the main building in a sea container

Facility Type	Description
	Recycling bins are also located on-site. Cardboard recycling bins, as well as regular Blue Box material recycling bins are available. BASWR picks up the materials from these bins on a regular basis.
Operational Days	The operating hours of the Huron Landfill Site are Tuesdays, Fridays, and Saturdays from 10:00 a.m. to 4:00 p.m.
Municipalities Served	Township of Huron-Kinloss
Landfill Name	Kinloss Landfill
Landfill life capacity remaining	The site capacity remaining is approximately 137,000 m^3 and site life remaining calculated as 15.2 years (137,000/9,000).
Operational activities	The acceptance of household waste was discontinued on August 1, 2002. It is not operating as a landfill at this time even though there is capacity left. Burning operations are conducted at the site. Recyclables, scrap metal, white goods, brush, tires and burnable material from the former Township of Kinloss and the Village of Lucknow are still accepted. Household waste from the former Township of Kinloss is transported to the Huron Landfill via curbside pickup
Operational Days	The operating hours during these months are on Saturdays from 10:00 a.m. to 2:00 p.m. The site is closed from November to the first Saturday in April.
Municipalities Served	Village of Lucknow and Township of Kinloss
Depots	Huron Landfill Site
Operational Staff	Not provided.

Table 28: Huron-Kinloss Curbside Collection Summary

Collection Summary	Garbage	Blue Box
Service provider (contractor/in house)	BASWR	BASWR
Contract Years and extensions	3 Years, signed in Feb 2017	
Contract End Date	2020	
Collection Frequency	Weekly	Bi-weekly
Bag Tags, Bin cost	$2.50	
Bag limits	No limit, as long as it's tagged	
Compliance Experiences	Pickup too early	Blue box materials blowing on windy days
Bulky or Organics collection	Fall Leaf Collection	
Associated By-Laws	2011-09 Waste Management By-Law Amendment	

Table 29: Huron-Kinloss Summary of Current Diversion Services Provided to Residents

Program	Curbside Collection	Stewardship Program	Managing Authority	End Use
Blue Box (curbside)	✓	✓SP	BASWR	Various end markets for sorted and baled materials
Blue Box (depot)		✓SP	BASWR	Various end markets for sorted and baled materials
LYW & Brush		× muni	Municipality	
Construction (Segregated)		× muni	Municipality	
Electronics		✓SP	Municipality	
Tires		✓SP	Municipality	
MHSW/HHW		✓SP	County	
Mattresses		× muni	Municipality	
Scrap Metal		× muni	Municipality	Local scrap dealer
White Goods/ Appliances		× muni	Municipality	Freon must be removed beforehand
Polystyrene (PS)		✓ SP/ muni	Municipality	
Plastic Film		✓ SP/ muni	Municipality	

✓- SP – indicates that the program is a stewardship program and/or all costs are covered by the stewardship program

✓- SP / muni – indicates that the program costs are covered by the stewards and the municipality

x- muni – indicates the program is not a stewardship program; however, the municipality provides the service to residents

Table 30: Huron-Kinloss Diversion Tonnes and Volume 2019

Program	Collected Tonnes
Garbage Residential	1,744.59
Garbage ICI	636.43
Blue Box (depot)	473.87
LYW & Brush	558.26
Electronics	4.37
Tires	47.72
MHSW/HHW	5.55
Mattresses	64.4
Scrap Metal	66.02
Total Diverted	1,220.19
Total Disposed	2,381.02
Diversion Rate (%)	34%

Table 31: Huron-Kinloss Waste Management Budget 2019

Budget Item 2019	Budgeted or Actual $
Expenses:	
Collection Garbage	$146,750
Collection Blue Box	
Landfill Operations	
Huron	$309,450
Kinloss	$165,100
Capital Expenses	
Huron	$75,000
Kinloss	
Revenues:	
Tipping Fees Landfill	
Huron	$259,000
Kinloss	
Diversion Materials Sale	
Huron	$18,000
Kinloss	$400
Bag Tags	
Operating Reserve	

Strengths and Challenges

The following table (Table 32) highlights the strengths and challenges with respect to waste management that were discussed with municipal representatives during the interviews.

Table 32: Huron-Kinloss Waste Management Strengths and Challenges

Strengths	Challenges
• Prepared a Strategic Plan (Oct. 2019) - Recycling at Landfill (Oct 2022) • Adjacent buffer land to Kinloss site available for purchase (83 acres) • LYW taken at three sites • LYW collected curbside one week per year in November by BASWR • All residents get curbside garbage and recycling collection by BASWR • "Truth about garbage" campaign brought interest in landfill life extension and diversion • "Bang the table" online Feedback and website called "Have your say H K" • Social aspect to Saturdays at the landfill/depot • Staff open to improvement, efficiencies and recommendations • Good relationship with Bruce Beach Cottage Association	• No bulky item pick up service, such as fridges • No HHW curbside collection • BASWR does not collect all packing (milk cartons, tetrapak, plastic films, polystyrene) nor cardboard curbside • BASWR management communication is limited and business finances are not transparent. Unaware of reporting on performance. • BASWR is not open to expanding the plant nor using Waste Management Inc. services. • No bag limit; but bags tags required • Seasonal non-permanent residents challenged to show local ID at landfill • Operating two landfill sites • Huron disposal site operating revenue significantly decreased in 2019; less garbage revenue from tipping fees; many non-local contractors were using site

Strengths	Challenges
• Good relationship with neighbours South Bruce (small tax base), Kincardine (larger) • Would like to promote more diversion services to extending landfill life; goal to extend life of Huron landfill • Reduced garbage tonnes from non-local residents by implementing ID checks at gate • Review tipping fees every five years; they are in comparative jurisdictional • Garbage bags max weight of 25 lbs per bag • GPS tracking proves timing for missed collection complaints • Use phone app to provide complains with photos, e.g. garbage in ditches • Think out of the box mentality and attitude	• Challenge for non-permanent cottagers to show local ID at landfill gate • Burning brush and clean materials at the Huron site • No composting program service • Their biggest site has a small area and potentially no room for composting • Challenges keeping staff due to limited hours • No litter fence for blown materials (plastic film and polystyrene foam) • Waiting on ECA approvals one year for landfill site drainage and runoff; no ditches permitted • Long lineups at landfill deters public from the coming to the landfill • LYW shows up with contamination: plastic bags, garden plastic planters etc. • No asphalt pad for composting; requires approval process MECP and additional staff • Huron landfill has 10 years capacity remaining • Hoped for more collaboration with other municipalities; some have their own ways • Kinloss would open as landfill when Huron is full; however, assume that there is a problem with site as it has a steep slope into ravine • New landfill consultant; no long term familiarity with the sites

5.2.3.4 Kincardine

The following section summarizes the information obtained through the document review and interviews with staff. It includes the following information:

- Population and households (Table 33);
- Facilities overview and operational staff (Table 34);
- Curbside collection summary (Table 35);
- Diversion services provided to residents (Table 36);
- Diversion performance and associated tonnage (Table 37); and
- 2019 waste management budget (Table 38).

Table 33: Kincardine Population, Households and IC&I Businesses

Category	2017	2018	2019	3 Year Change
Population Total	8,479	8,646	8,817	3.99%
Households Total	5,879	5,913	5,973	1.60%
IC&I Businesses	215	214	214	-0.47%

Table 34: Kincardine Facilities Overview and Operational Staff

Facility Type	Description
Landfill Name	Ward 3 (ECA No. A272001)
Landfill life capacity remaining	60 years, assuming waste fill rate of 1,500 m3/year
Operational activities	The Site accepts municipal waste from private vehicles only during the summer only to streamline the municipality's waste disposal operations. The current ECA allows for the disposal of domestic, non-hazardous waste and allows for the burning of some wastes (brush, lumber and clean wood)
Operational Days	Monday, Tuesday, Wednesday, Thursday and Friday from 9:00 AM. to 3:00 PM and Saturday from 8:00 AM to 12:00 PM.
Municipalities Served	Municipality of Kincardine
Landfill Name	Ward 1(ECA No. A270203)
Landfill life capacity remaining	Closed November 2011
Operational activities	The Site closure activities began in 2010 with the progressive capping of the completed ELA areas. In 2012, an overall Site clean-up was conducted which included the removal of the majority of the former waste-disposal-related items. Closure works, including final capping and grading, were completed in 2013. Minor clean-up activities continued throughout 2013 in conjunction with the final closure.
Operational Days	N/A
Municipalities Served	Municipality of Kincardine
Landfill Name	Kincardine Waste Management Centre (ECA No. A272702)
Landfill life capacity remaining	34 years (closure in 2043), based on a compaction rate of 0.70 tonnes/m^3 and assuming a 0.5 percent per year increase in population within the Municipality
Operational activities	Municipal waste received at the Site during the reporting period are either segregated for recycling/diversion, or disposed of at the active disposal area. Waste material segregated for off-Site recycling/diversion is temporarily stockpiled at the Site. Blue box recyclables, including fine paper, newspaper, metal cans, plastics, clear glass, coloured glass, and boxboard, are picked up curbside on a bi-weekly basis by Bruce Area Solid Waste Recycling (BASWR). Blue box recyclables are accepted at the Site at no charge and picked up by BASWR as part of the curbside program. Waste disposal carts/bins are used at the KWMC and the Ward 3 Landfill sites for the temporary storage of the blue box materials. The following materials are also collected on-Site: tires, scrap metal and white goods, drywall and shingles, clean wood and brush, Styrofoam, bale wrap, mattresses, light bulbs, propane tanks, batteries, e-waste and MHSW.
Operational Days	Monday, Tuesday, Wednesday, Thursday and Friday from 9:00 AM. to 3:00 PM and Saturday from 8:00 AM to 12:00 PM.
Municipalities Served	Municipality of Kincardine
Depots	Kincardine Waste Management Centre
Operational Staff	Full time staff include an attendant, scale house operator, administrative assistant and an executive assistant. The roads supervisor also assists with waste operations

Table 35: Kincardine Curbside Collection Summary

Collection Summary	Garbage	Blue Box
Service provider (contractor/in house)	BASWR	BASWR
Contract Years and extensions	3 years, with an overall increase of 5.5% over the term $215, 265.27	
Contract End Date	2022	
Collection Frequency	Weekly	Bi-weekly
Bag Tags, Bin cost	$2.50	
Bag limits	No limit	
Common Complaints	• Recycling/garbage not picked up • Not offer enough diversion programs • Limited Landfill operating hours	
Bulky or Organics collection	N/A	
Associated By-Laws	2019-123 Property Standards By-Law 2019-124 Clean and Clear Yards By-Law 2004-177 and updated 2019-143 By-Law to Enter into an Agreement for Residential and Commercial Refuse Collection within the Municipality of Kincardine and Commercial Cardboard Collection Within Ward One	

Table 36: Kincardine Summary of Current Diversion Services Provided to Residents

Program	Curbside Collection	Stewardship Program	Managing Authority	End Use
Blue Box (curbside)	✓	✓ SP	BASWR	Various end markets for sorted and baled materials
Blue Box (depot)	✓	✓SP	BASWR	Various end markets for sorted and baled materials
LYW & Brush		× muni	Municipality	
Wood		× muni	Municipality	
Construction (Segregated)		× muni	Municipality	
Electronics		✓SP	Municipality	
Tires		✓SP	Municipality	
MHSW/HHW		✓SP	County	
Mattresses		× muni	Municipality	
Scrap Metal		× muni	Municipality	Local scrap dealer
White Goods/ Appliances		× muni	Municipality	Freon must be removed beforehand
Polystyrene (PS)		✓SP/muni	Municipality	
Plastic Film		✓SP/muni	Municipality	

✓- SP – indicates that the program is a stewardship program and/or all costs are covered by the stewardship program

✓- SP / muni – indicates that the program costs are covered by the stewards and the municipality

x- muni – indicates the program is not a stewardship program; however, the municipality provides the service to residents

Table 37: Kincardine Diversion Tonnes and Volume 2019

Program	Collected Tonnes
Garbage Residential	4,858.08
Construction Segregated	875.72
Blue Box (depot)	191.3
Blue Box (curbside)	956.3
Wood	272.16
Electronics	21.73
Tires	15.14
MHSW/HHW	40.14
Mattresses	31.45
Scrap Metal	281.9
Total Diverted	2,685.84
Total Disposed	4,858.08
Diversion Rate (%)	36%

Table 38: Kincardine Waste Management Budget 2019

Budget Item 2019	Budgeted or Actual $
Expenses:	$1,275,030
Collection Garbage	
Collection Blue Box	
Landfill Operations	
Revenues:	$1,247,994
Tipping Fees Landfill	
Diversion Materials Sale	
Bag Tags	

Strengths and Challenges

The following table (Table 39) highlights the strengths and challenges with respect to waste management that were discussed with municipal representatives during the interviews.

Table 39: Kincardine Waste Management Strengths and Challenges

Strengths	Challenges
• Open to a joint venture County wide structure to operative services; County role increase responsibilities rather than limited to facilitation • Open to County taking on the polystyrene recycling program • Have a site available for a potential organics program • All wood is grinded and used for daily cover for open landfill cell • Waste Management Centre is working well. Established a state of art facility, has good flow	• No compost program, such as Southgate program in Grey County • Not enough diversion in the C&D, ICI, restaurant sectors; a lot of landfill tonnes due to renovation waste from homes and contractors • Not enough resources to provide more programs; don't have the time and resource to investigate • Pre-amalgamation mindset remains; some municipalities are operating two landfills with the second site remaining open due to political reasons • ECA allows burning of clean waste

Strengths	Challenges
and a functional area for residents and access to the open face for contractors. • W3 landfill capacity is 40-60 years; but using an accelerated approach (see more large loads via Bruce Power retrofit) results in 35 years capacity approximately • Piloted film plastics but there were compliance issues. Staff were not sure if due to the public's lack of info or folks offloading. Other plastics would show up in the film bin. Tried to educate the public. Bins were located at WM centre and there were depots at library, OCC, Kincardine. This included OCC bins and film plastics • Public willingness and buy in to recycle, divert and community composting • Had a reconvening of the environmental committee • Blue Box and garbage curbside collection arrangement with BASWR is working well. • Bag tag system in use, change colour annually for validity • Open to a potential clear bag policy to support compliance as well as bag limits and surcharges beyond the limit • Litter and illegal dumping are not a significant problem. When found, identify source and apply the Bylaw chargeback penalty • Would like to add more staff e.g. mid-level management position as a direct supervisor. • EPR programs have transitioned – keeping tires program, signed up with EPRA for electronics, batteries, MHSW	• No scales at landfill • Waste management centre is reaching capacity • Staffing; seeing change in demographic, retirements etc. Business as usual is not going to work for long term staffing. No weekends off and work every Saturday • Saturdays have long line ups. Opening hours do not suit Monday to Friday working hours. • Drop off location at Kincardine is not attended; receive non acceptable waste e.g. large trees • Brush and LYW is accepted as drop off at Kincardine site; but no composting process nor approval to do so. Council request to consider composting. • Lakefront development areas would like to see collection by the Town. Some have community bins and private collation services funded by condo/cottage group fees. • Unsure if communication is far reaching; potential disconnect with seasonal residents as they are not signed up for newsletters • Public feedback regarding limitation of diversion program • No year round nor permanent or semi-permanent depot for MHSW collection • BASWR made sense back when it was formed (limited services 1989); however, now question whether BASWR makes sense today and in the future • Unclear how BASWR manages the business side of operations. • BASWR has collected garbage since 2004 and in 2016 a contract extension, for 3 year terms. No tender to back up market costs.

Following the interviews, and after the options evaluation had been finalized by the MIC (discussed in Section 8.0), Kincardine staff indicated that they were interested in reviewing garbage carts for each household which could include various cart sizes and annual collection costs based on the size of the cart.

5.2.3.5 Northern Bruce

The following section summarizes the information obtained through the document review and interviews with staff. It includes the following information:

- Population and households (Table 40);
- Facilities overview and operational staff (Table 41);
- Curbside collection summary (Table 42);

- Diversion services provided to residents (Table 43);
- Diversion performance and associated tonnage (Table 44); and
- 2019 waste management budget (Table 45).

Table 40: Northern Bruce Population and Households

Category	2017	2018	2019	3 Year Change
Population Total	4,050	4,105	4,153	1.03%
Households Total	5,200			

Table 41: Northern Bruce Facilities Overview and Operational Staff

Facility Type	Description
Landfill Name	St. Edmunds Landfill (ECA No. A273002, A273003)
Landfill life capacity remaining	7 years, based on the average filled rate of 1,685 m^3/year
Operational activities	Burning of brush, trees and clean wood material is allowed on-Site. Drop off depot location for recyclable materials, including mixed recyclables, glass, steel paint cans, aluminum, paper, boxboard and various plastics. The following materials are also collected on-Site: polystyrene, tires, scrap metal and white goods, automotive batteries, e-waste, mattresses, and LYW.
Operational Days	Nov 1 - March 31 Wednesday 10:00 am - 4:00 pm April 1 - October 31 Wednesday 9:00 am - 5:00 pm and Saturday 9:00 am - 5:00 pm
Municipalities Served	• Municipality of Northern Bruce Peninsula
Landfill Name	Lindsay Landfill (ECA No. A272902)
Landfill life capacity remaining	15-20 years, based on the average filled rate of 1,200 m3/year
Operational activities	Burning of brush, trees and clean wood material is allowed on-Site. Drop off depot location for recyclable materials, including mixed recyclables, glass, steel paint cans, aluminum, paper, boxboard and various plastics. The following materials are also collected on-Site: polystyrene, tires, scrap metal and white goods, automotive batteries, e-waste, mattresses, and LYW.
Operational Days	Nov 1 - March 31 – Saturdays from 10:00 am - 4:00 pm April 1 - October 31 – Fridays and Sundays from 9:00 am - 5:00 pm
Municipalities Served	Municipality of Northern Bruce Peninsula
Landfill Name	Eastnor Landfill (ECA No. A272301)
Landfill life capacity remaining	45 years
Operational activities	Drop off depot location for recyclable materials, including mixed recyclables, glass, steel paint cans, aluminum, paper, boxboard and various plastics. The following materials are also collected on-Site: polystyrene, tires, scrap metal and white goods, automotive batteries, e-waste, mattresses, LYW and plastic film.
Operational Days	Nov 1 - March 31 - Mondays from 10:00 am - 4:00 pm April 1 - October 31 – Mondays and Saturdays from 9:00 am - 5:00 pm
Municipalities Served	Municipality of Northern Bruce Peninsula
Operational Staff	Full time scale house operator and part time roads and landfill operators

Table 42: Northern Bruce Curbside Collection Summary

Collection Summary	Garbage	Blue Box
Service provider (contractor/in house)	Waste Management of Canada	Waste Management of Canada
Contract Years and extensions, tender or other	• 3 years • 2019 annual cost - $272,255, for both garbage and recycling collection • Option to extend	• 3 years • 2019 annual cost - $272,255, for both garbage and recycling collection • Option to extend
Contract End Date	2019	2019
Collection Frequency	Weekly	Weekly
Bag Tags, Bin cost	N/A	
Bag limits	2	
Clear Bag Policy	N/A	
Bulky or organics collection	N/A	
Associated By-Laws	2013-74 Waste Management By-Law	

Table 43: Northern Bruce Summary of Current Diversion Services Provided to Residents

Program	Curbside Collection	Stewardship Program	Managing Authority	End Use
Blue Box (curbside)	✓	✓ SP	Waste Management of Canada	Various end markets for sorted and baled materials
Blue Box (depot)	✓	✓ SP	Waste Management of Canada	Various end markets for sorted and baled materials
Electronics		✓ SP	Municipality	
Tires		✓ SP	Municipality	
MHSW/HHW		✓ SP	County	
Mattresses		× muni	Municipality	
Scrap Metal		× muni	Municipality	Local scrap dealer
White Goods/ Appliances		× muni	Municipality	Freon must be removed beforehand
Polystyrene (PS)		✓ SP/mini	Municipality	
Plastic Film		✓ SP/mini	Municipality	

✓- SP – indicates that the program is a stewardship program and/or all costs are covered by the stewardship program

✓- SP / muni – indicates that the program costs are covered by the stewards and the municipality

x- muni – indicates the program is not a stewardship program; however, the municipality provides the service to residents

Table 44: Northern Bruce Diversion Tonnes and Volume 2019

Program	Collected Tonnes
Garbage Residential	1,839.03
Construction Segregated	79.3
Blue Box (depot)	162.88
Blue Box (curbside)	324.02
LYW & Brush	158.94
Wood	259.71
Electronics	29.47

Program	Collected Tonnes
MHSW/HHW	3
Scrap Metal	117.08
White Goods/Appliances	6.11
Total Diverted	1,140.51
Total Disposed	1,839.03
Diversion Rate (%)	38%

Table 45: Northern Bruce Waste Management Budget 2019

Budget Item 2019	Budgeted or Actual $
Expenses:	
Collection Garbage	$115,000
Collection Blue Box	$235,000
Misc. Collection Costs	$79,500
Landfill Operations	$330,900
Capital Costs	$47,000
Revenues:	

Strengths and Challenges

The following table (Table 46) highlights the strengths and challenges with respect to waste management that were discussed with municipal representatives during the interviews.

Table 46: Northern Bruce Waste Management Strengths and Challenges

Strengths	Challenges
• RPRA Datacall diversion rate, in comparison to BASWR's diversion rate, they are 10 % higher • Open to the County taking on diversion role and responsibilities • Manage three landfills with at least one open each day of week (in summer only) • Landfills are spread out with one hour drive between them (between most northerly and southerly locations) • Landfills have power on site • Removed rural waste bins due to contamination • Provide curbside recycling collection now and see an increase in diversion rate • Able to measure diversion performance better since scales in place at landfills • Reuse site is very popular and has a social element • Working relationship with Cottage Associations • Council is forward thinking, open to changes that are fact based • Ad Hoc committee, Waste Diversion Group (1 council member and community)	• Large tourist influx seasonally and weekends; Population is 4,000, Population expands to 16,000 during the season; volumes triple (at least double) in the summertime • Collection is Mondays; get complaints from the public that Monday is not the best option • Small staff size; challenged to operate three landfills • High cost to manage three landfills • Challenges to find markets for all recyclables • Collection route has many small cottage roads that may get missed • Asked BASWR in 2007 for collection service; BASWR did not show interest due to Northern location; would increase the costs/hhld for other municipal partners • Too many seasonal tourists to check ID at landfill for local residency • Polystyrene was being stockpiled up until November 2020. This has since been removed by Second Wind Recycling

Strengths	Challenges
• Community has very large environmental backing • Environmental ad hoc committee provides educational pieces to the public in local newspaper; brought in different initiatives • Working operational relationship with neighbouring municipalities. Bruce County Public Works Association members share knowledge and work well together • Technical Sub Committee, works well	• Polystyrene densifier equipment at Hanover; have not been able to share this equipment yet

5.2.3.6 Saugeen Shores

The following section summarizes the information obtained through the document review and interviews with staff. It includes the following information:

- Population and households (Table 47);
- Facilities overview and operational staff (Table 48);
- Curbside collection summary (Table 49);
- Diversion services provided to residents (Table 50);
- Diversion performance and associated tonnage (Table 51); and
- 2019 waste management budget (Table 52).

Table 47: Saugeen Shores Population, Households and IC&I Businesses

Category	2017	2018	2019	3 Year Change
Population Total	13,920	14,131	14,578	4.73%
Households Total	7,681	7,764	7,910	2.98%
ICI& Businesses	266	265	267	0.38%

Table 48: Saugeen Shores Facilities Overview and Operational Staff

Facility Type	Description
Landfill Name	Southampton Landfill (ECA No. A27310)
Landfill life capacity remaining	15.6 years, at average fill rate
Operational activities	Accepts residential waste. Drop off depot location for recyclable materials, including cardboard and film plastic. The following materials are also collected on-Site: tires, wood waste, scrap metal and white goods, construction debris, e-waste, green waste, MHSW and mattresses.
Operational Days	Monday, Wednesday, Friday 9:00 am - 5:00 pm and Saturday 9:00 am - 4:00 pm
Municipalities Served	Saugeen Shores
Depots	Southampton Landfill
Operational Staff	1 full time person 6 days per week, 3 part time landfill scale house attendants

Table 49: Saugeen Shores Curbside Collection Summary

Collection Summary	Garbage	Blue Box
Service provider (contractor/in house)	BASWR	BASWR
Collection Frequency	Weekly	Bi-weekly
Bag Tags, Bin cost	$2.00	Blue bins are $7.63 plus HST
Common Complaints	• Garbage wasn't picked up • No organics collection •	• Not all materials can be recycled
Bulky or Organics collection	N/A	
Associated By-Law	39-2008 Waste Disposal By-Law	

Table 50: Saugeen Shores Summary of Current Diversion Services Provided to Residents

Program	Collection Service	Stewardship Program	Managing Authority	End Use
Blue Box (curbside)	✓	✓ SP	BASWR	Various end markets for sorted and baled materials
Blue Box (depot)		✓ SP	BASWR	Various end markets for sorted and baled materials
Electronics		✓ SP	Municipality	
Tires		✓ SP	Municipality	
MHSW/HHW		✓ SP	Bruce County	
Mattresses		× muni	Municipality	
Scrap Metal		× muni	Municipality	Local scrap dealer
White Goods/ Appliances		× muni	Municipality	Freon must be removed beforehand
Polystyrene (PS) (starting January 2021)		✓ SP/muni	Municipality	
Plastic Film		✓ SP/muni	Municipality	

✓- SP – indicates that the program is a stewardship program and/or all costs are covered by the stewardship program

✓- SP / muni – indicates that the program costs are covered by the stewards and the municipality

x- muni – indicates the program is not a stewardship program; however, the municipality provides the service to residents

Table 51: Saugeen Shores Diversion Tonnes and Volume 2019

Program	Collected Tonnes
Garbage Residential	10,169
Construction Segregated	689
Blue Box (depot)	1,135
LYW & Brush	170
Wood	1,501
Electronics	37
Tires	231
MHSW/HHW	33
Mattresses	43
Scrap Metal	161
Total Diverted	4,001
Total Disposed	10,169
Diversion Rate (%)	28%

Table 52: Saugeen Shores Waste Management Budget 2019

Budget Item 2019	Budgeted or Actual $
Expenses:	
Collection Garbage	
Collection Blue Box	
Landfill Operations	$960,960
Revenues:	
Tipping Fees Landfill	$715,433
Diversion Materials Sale	$34,660
Bag Tags	
General Levy	$452,100
Sale of Composters	$2,100
BASWR Lease Payment	$5,000
Operating Reserve	

Strengths and Challenges

The following highlights the strengths and challenges with respect to waste management that were discussed with municipal representatives during the interviews.

Table 53: Saugeen Shores Waste Management Strengths and Challenges

Strengths	Challenges
• Draft waste management strategy recently prepared; final to come in 2020 • New staff with fresh perspectives; interested in efficiencies • Good working relationship with neighbouring municipalities; share knowledge transfer • Open to the County taking on a larger role; reach economies of scale • Operate one landfill in Southampton (has a scale) and one closed landfill in Port Elgin • Doubled tonnes of diverted electronics, scrap metal, mattresses from 2018 to 2019 • BASWR contract for both garbage and Blue Box curbside collection; BASWR uses landfill scale • Two locations with bins for drop off cardboard and film plastic; no cardboard accepted in current curbside collection • Collects recycling from downtown business, the arena and Town Hall • Bag tags; see changes in behaviour, more recycling, less garbage coming in • Enforcing bag tag system by leaving untagged bags or leaving stickers for information purposes; keep a list of non-compliant addresses • Sells backyard composters to residents and provides composting information online	• Small rural population and limited resources • Southampton landfill capacity has 7 to 15 years capacity remaining depending on fill rate (AMR report). Landfill has 12 years of capacity based on average fill rate. Historical fill rates are used to determine capacity. • Total collected waste tonnes increasing each year; tripled from 2015 to 2019 • BASWR MRF, located at the Southampton landfill, has no space for expansion • BASWR future unclear regarding Blue Box transition to full EPR; Saugeen Shores picked the earliest transition date (potential cost savings) while other partners picked the last transition date • Current Pay As You Throw (PAYT) bag tag system is not favoured by Mayor; rather increase tax levy ($49 currently) • No garbage bag limit (number of bags) as long as tagged; weight limit is 25 pounds • Unable to offer the level of service of larger municipalities • Packaging materials that are not collected for recycling, due to hard to find markets, include polystyrene, tetrapaks, milk cartons, aluminium foil plates, waxed cardboard and more • No LYW nor bulky item curbside collection services

Strengths	Challenges
• LYW can be dropped off at landfill LYW pile; separate entrance • Public would like an organics collection program • Batteries collection; drop off at four locations • Reuse at the landfill; "take it/leave it" trailer on site located after the scale • Illegal dumping is not a major issue; one dozen cases a year	• Organics: view is that as a municipality, would not be mandated by new organics legislation; applies to 50,000 population to require curbside organics collection. View is that "the cost for curbside organics collection would exceed the cost to landfill it." • Construction waste is a challenge for proper diversion and recycling. Waste is generated from residential housing but disposed by private contractors. Currently cheaper for contractors to pay the unsorted tipping fee than spend time to sort it for diversion. Much of it is contractors building residential houses. • Windblown litter into the forest behind the landfill; no litter fencing • Two Council members considering incineration as an option; residents are not requesting incineration options

During the study input from Elected Officials was also provided. This has been included in Table 54.

Table 54: Saugeen Shores Elected Official Input

Elected Official	Input
1	• Very interested in what can happen in the area of Waste Management. • Look at the possibility of building an incinerator in Saugeen Shores. It could take all the garbage from the area and convert it into energy with a generator. • Consider a partnership with Owen Sound, who spends hundreds of millions of dollars shipping waste to Michigan. • Incinerator could be one of the greatest green initiatives that the community could undertake.
2	• Township of Georgian Bluffs and Chatsworth, back in 2013 they invested into an Anaerobic Biogrid Digester; have chatted on several occasions about the Digester. There is some discussion about "mothballing" this facility until such time the Provincial Government begins their comprehensive review of the Waste–Free Ontario Strategy 2025 or until such time a final plan is in place. The preliminary plan calls for Ontario communities to increase their organic waste diversion rate by about 10%. • When Chatsworth and Georgian Bluffs invested in the Biogrid Digester system ($1.5 to 2 Million which included a sewage lagoon), they were optimistic that digesting organics along with accommodating septic waste and Fat, Oil and Grease was their goal. Over time, septic waste has become the main source that fuels the digester which results in the production of electricity. Hydro One made payments to the two municipalities ($70,000 in first year) in lieu of electricity produced by the digester. From the organics side of things, this part of the equation has not proven to be very successful. • Consideration of introduction of a Green Box Program. Southgate is a fairly small municipality that has a Green Box program for the handling of organics

Elected Official	Input
	• If the Province is in fact going to pass legislation that calls for the reduction of organics by 2025 to 2030, should Saugeen Shores explore potential partnership with Chatsworth/Georgian Bluffs? • Is transporting of Sewage to a site like Georgian Bluffs Biogrid Digester an option, as we are nearing capacity at our Southampton sewage plant, a short term solution? Ontario Clean Water Agency (OCWA) operates the sewage lagoon for Chatsworth and Georgian Bluffs. The Lagoon is located about 35 minutes from Saugeen Shores Southampton Sewage Plant • A Green Bin program can be expensive to operate. Trying to find a new site for a landfill site is also expensive. The Provincial Government is looking for alternatives including reduction of organics. Partnering with another municipality like Georgian Bluffs/Chatsworth/Southgate may be an option to consider.
3	• Goals include reduction of landfill use, increase in recycling and reuse, sustainable and affordable management of food waste including diversion of food waste from landfill • Study outcomes include: o Fulfillment of the above goals and a system of food waste collection; however, realize from other municipalities' experiences, that this is an expensive process to have collection at homes like garbage and recycling; o Consideration of the Jasper, Alberta animal-proof neighbourhood food-waste collection system (https://jasper-Alberta.com/2210/Composting) • Current challenges include: o Waste collection and recycling COVID-related challenges o Single-use plastics; now being seen as being safer and more sanitary for COVID o Many re-use depots are not collecting used goods, and as a result many people's focus is not on recycling and re-use, but on being safe o Without an end to COVID in sight, difficult for all municipalities to make long-term plans. • As is the case with small municipalities, lack budgets for more sophisticated recycling technologies, therefore more of their waste goes to landfill (e.g. machinery to separate the 3-4 multi-layers of materials in packages like tetrapaks) • Reduction of global recycling markets for plastic, styrofoam, glass • Loss of markets for materials leading to more stress on the landfill, and a significantly reduced revenue from Blue Box marketed materials • A large number of seasonal residents and tourists rent seasonal properties. Most seasonal residents are from large municipalities within the GTA. They bring with them expectations that there is the recycling capabilities of their home municipalities and often express dissatisfaction with the recycling system. Once you explain to them what the limits are, they understand, but the bottom line is to explain, if you want to recycle, don't buy tetrapaks or milk cartons. • Experiencing unprecedented construction growth and as a result, the landfill has been impacted by increased construction waste. • Important recent changes: increased charges for waste to motivate contractors to recycle more and put less in landfill. • Operate a garden/lawn waste no-charge compost site which is well-managed and organized. • Summer 2019, staff implemented a very successful film plastics collection program. Had to increase collection from once a month to twice. The film plastics are collected by a company in Elmwood who in turn sell them to a company in Listowel that converts the plastics into plastic pellets which are used to make plastic lawn furniture, etc. It would beneficial to bring in more programs like this. • Could food waste, once composted, be used by County farmers as a fertilizer.

5.2.3.7 South Bruce

The following section summarizes the information obtained through the document review and interviews with staff. It includes the following information:

- Population and households (Table 55);
- Facilities overview and operational staff (Table 56);
- Curbside collection summary (Table 57);
- Diversion services provided to residents (Table 58);
- Diversion performance and associated tonnage (Table 59); and
- 2019 waste management budget (Table 60).

Table 55: South Bruce Population, Households and IC&I Businesses

Category	2017	2018	2019	3 Year Change
Population Total	5,582	5,567	5,571	-0.20%
Households Total	1,101	1,101	1,101	0.00%
IC&I Businesses	85	85	84	-1.18%

Table 56: South Bruce Facilities Overview and Operational Staff

Facility Type	Description
Landfill Name	Carrick-Mildmay (ECA No. A272101)
Landfill life capacity remaining	21 years, assuming an average fill rate of 1,564 m^3
Operational activities	Burning of brush, trees and clean wood material is allowed on-Site. Drop off depot location for recyclable materials, including mixed recyclables, glass, steel paint cans, aluminum, paper, boxboard and various plastics. The following materials are also collected on-Site: tires, scrap metal and white goods, automotive batteries, e-waste, mattresses, MHSW and LYW
Operational Days	• Wednesdays from 9:00 - 12:00 and Saturdays from 9:00 - 4:00
Municipalities Served	South Bruce
Landfill Name	Teeswater - Curloss (ECA No. A272201)
Landfill life capacity remaining	16 years, assuming average fill rate of 2,140 m^3
Operational activities	Burning of brush, trees and clean wood material is allowed on-Site. Drop off depot location for recyclable materials, including mixed recyclables, glass, steel paint cans, aluminum, paper, boxboard and various plastics. The following materials are also collected on-Site: tires, scrap metal, e-waste, mattresses and LYW.
Operational Days	Tuesdays and Thursdays from 9:00 - 1:00 and Saturdays from 9:00 - 4:00
Municipalities Served	South Bruce
Operational Staff	Not provided.

Table 57: South Bruce Curbside Collection Summary

Collection Summary	Garbage	Blue Box
Service provider (contractor/in house)	Bruce Service Sales & Rentals/APC	BASWR
Collection Frequency	Weekly	Bi-weekly
Bag Tags, Bin cost	$2.50	
Bag limits	No	
Bulky or organics collection	N/A	
Associated By-Laws	2019-52 Fees By-law 2016-16 Contract for Services Agreement – Curbside Garbage Collection	

Table 58: South Bruce Summary of Current Diversion Services Provided to Residents

Program	Curbside Collection	Stewardship Program	Managing Authority	End Use
Blue Box (curbside)	✓	✓ SP	BASWR	Various end markets for sorted and baled materials
Blue Box (depot)		✓ SP	BASWR	Various end markets for sorted and baled materials
Electronics		✓ SP	Municipality	
Tires		✓ SP	Municipality	
MHSW/HHW		✓ SP	County	
Mattresses		× muni	Municipality	
Scrap Metal		× muni	Municipality	Local scrap dealer
White Goods/ Appliances		× muni	Municipality	Freon must be removed beforehand
Polystyrene (PS)		✓ SP/muni	Municipality	
Plastic Film		✓ SP/muni	Municipality	

✓- SP – indicates that the program is a stewardship program and/or all costs are covered by the stewardship program

✓- SP / muni – indicates that the program costs are covered by the stewards and the municipality

x- muni – indicates the program is not a stewardship program; however, the municipality provides the service to residents

Table 59: South Bruce Diversion Tonnes and Volume 2019

Program	Collected Tonnes
Garbage Residential	1,348.08
Construction Segregated	206.8
Blue Box (depot)	328.7
Wood	122.34
Electronics	7.05
MHSW/HHW	6.8
Scrap Metal	103.89
Total Diverted	775.58
Total Disposed	1,348.08
Diversion Rate (%)	36.5%

Table 60: South Bruce Waste Management Budget 2019

Budget Item 2019	Budgeted or Actual $
Expenses:	
Collection Garbage/Blue Box	$138,530
Carrick Landfill Expenses	$94,893
Curloss Landfill Expenses	$156,488
Capital Expenses	$38,151
Revenues:	
Diversion Materials Sale	$270
User Fees Garbage Collection	$91,525
Bag Tags	$121,845
Carrick Landfill Revenue	$29,716
Curloss Landfill Revenue	$181,553
Operating Reserve	$34,997

Strengths and Challenges

The following table (Table 61) highlights the strengths and challenges with respect to waste management that were discussed with municipal representatives during the interviews.

Table 61: South Bruce Waste Management Strengths and Challenges

Strengths	Challenges
• No seasonal residents in the area • Goal to reduce use of landfill • 20 years landfill capacity; study done this summer • Cost analysis in progress to purchase sea containers to store electronic waste • Added camera onsite for security (using deer trail cameras) • 2021 goal to provide power at the site • Garbage collected curbside by Bruce Waste Services; not BASWR • Operating hours are satisfactory; some car lineups Saturdays • Do not receive many complaint phone calls; exception Maple Creek subdivision • Promotes backyard composting; just got a price on Green Cones • Good participation at landfill depot especially from rural area; bins are full • Social aspect to Saturdays at the landfill, especially farmers • Council shows interest; asks staff questions especially regarding EPR • Good relationship with neighbouring municipalities; all communicate and share advice with each other • Annual waste calendar mail out	• Local farmers burn and bury waste on their farms rather than bring to landfill/depot • Very rural demographic, large agricultural area, small population, limited resources • Bordering road with Brockton; issue to share collection resources is unresolved, amending the ECA to do so is not viewed as worthwhile; applies to Maple Creek subdivision (approximately 21 households) • Brockton will not collect curbside from the bordering Maple Creek subdivision as it is not within their jurisdiction • Polystyrene collection program needs solution; overwhelmed with the material • BASWR future is unknown; not getting answers they need • Concern if have to provide curbside recycling collection services in-house; need to purchase truck and staffing additions • BASWR deficit $140,000 last year; anticipate 15% to 20% cost increase this year • Not a full partner with BASWR; rural areas not collected curbside; would need capital buy-in with BASWR; pay $11,000 annually for urban Blue Box service i.e. $31.40/hhld

Strengths	Challenges
• Actively identifying users for local residents only at landfill • Teeswater site has a long life; Mildmay site has a short life • Traces any illegal dumping to source and impose a penalty fee • Bag tag fees: $2.50 and $3.00 at landfill per garbage bag • New management and administrative staff to the role; new perspective	• No document of original arrangements regarding town limits for BASWR collection • Rural farmers do not want to pay extra for curbside collection • Bale wrap; do not have a recycler; storing material for now • Electronic waste at landfill depot; getting break-ins and stolen electronics; • LYW used as landfill cover; not compost • No electricity service at landfill; solar powered scale • Do not share any resources with other municipalities; however, Brockton residents share landfill use with an existing agreement • Digital communications, social media not reaching senior residents

5.2.4 Impacts of COVID-19

The coronavirus (COVID-19) pandemic led to a major disruption of waste management services. On March 17th, 2020, the Ontario government declared a state of emergency in Ontario which ordered the closure of non-essential business, which included daycares, bars and restaurants, theatres and private schools. Many municipalities in Ontario decided to reduce waste services and close landfills in order to prevent the spread of Covid-19. During the interview with each municipality (which was held in June, 2020), they were asked about the impacts of COVID-19 on their program, some of which is captured in Section 6.2.3, and summarized in Table 62.

Table 62: Summary of Impacts from COVID-19

Municipality	Impacts of COVID
Arran-Elderslie	• Increase in customers as they were one of the few landfills open • Only let in a few residents at a time • Increase in waste tonnage was identified during COVID • Thursday pickups have increased in the last 4 - 6 months, in comparison to last year at the same time
Brockton	• Greenhock landfill is closed • BASWR would not sort at the curb during collection • BASWR was sending recyclables to Bluewater, at the cost of municipalities • No discussion on additional costs • Bruce Waste Sales, no issues collecting, they have noted waste has increase during COVID • Reduced number of cars on site (landfill), more signage to direct people through, had protocols in place for money handling • A handful of residents from outside of boundaries when to the landfill to dispose materials

Municipality	Impacts of COVID
Huron-Kinloss	• Have not seen the tonnages this year yet • No access to files right now/server • Revenues are down right now • Curbside collection is up, trucks are returning 2 hrs earlier full • Staff interacting concerns, PPE, masks over heated
Kincardine	• See a decrease now in use • May see a surge due to softening of restrictions
Northern Bruce Peninsula	• Closed down landfills • Kept it open for account holders (no cash, allowed invoicing) • Used to only accept cash, brought in interact • Recommending at this time to keep re-use buildings will remain closed • When landfills opened up they limited entrance to 5 cars at a time
Saugeen Shores	• Closed scale house to public fairly quickly, still completed curbside collection • Reopened to the public for normal operations in May and continued with this • Planned all extra staff and traffic control and they didn't see a lot of volume • First hour was heavy traffic and overall slightly more cars than a typical Monday but not a large increase in number • Limited to 5 cars at a time • Car volume has been steady
South Bruce	• Revenues from landfill since COVID has skyrocketed, allocate those funds to reserves to get power at the landfill sites (modernize the landfills) • Keep landfill going, shut down for almost 2 weeks to prep for safety precautions • Garbage collection was still going on • Because of COVID, not taking cash, alternatives are to buy bag tags or to use the scale house and the municipality will invoice them later on • A lot of invoices being sent out, a lot of extra person power required • No real issue with residents not paying • Issue of non-residents using the landfills, because they were open (half a dozen from Huron-Kinloss)
BASWR	• Temporarily diverted collected material to another facility to reorganize their own facility

6.0 Jurisdictional Review

This section presents the findings and results of the jurisdictional review and best practices for residential solid waste management. The approach and methodology for this task has been described in Section 3.3.1.

6.1 Selected Jurisdictions

The 25 Canadian municipal, county and regional jurisdictions that were considered for review as part of the jurisdictional review included the following:

- District of Muskoka
- Grey County
- Oxford County
- County of Peterborough
- Wellington County
- City of Guelph
- Huron County
- Kawartha Lakes
- County of Northumberland
- Simcoe County
- Norris Arm/Central Waste Management Region
- Sunshine Coast Regional District
- Township of Georgian Bluffs and Chatsworth
- Township of Southgate (Grey County)
- Jasper
- County of Norfolk
- Kenora
- North Bay
- Regional District of East Kootenay
- Thompson-Nicola Regional District
- Greater Miramichi RSC
- East Hants
- Durham Region
- York Region
- Metro Vancouver

A summary table of 25 municipal jurisdictions considered for the review, along with their high level relevant waste management approaches, operations and policies and the rationale for consideration as a comparative jurisdiction for short list selection has been included in Appendix A.

6.2 Selected Six Jurisdictions for Review

In consultation and collaboration with the MIC, the list of 25 was ranked according to discussion with and feedback received from the MIC. The six preferred jurisdictions by the MIC for this study were all located in South Eastern Ontario and included the following jurisdictions:

- Oxford County;
- Grey County (Including Southgate, Chatsworth and Georgian Bluffs);
- City of Guelph;
- District of Muskoka;
- Peterborough County; and
- Wellington County.

A summary spreadsheet was populated with relevant high level findings from each of the six jurisdictional reviews. The data included information collected by internet research and one phone call to the relevant government contact to confirm or clarify researched findings, where necessary. The information gathered, by topic, and sub-topics (to categorize the questions) and confirmed from each of the six shortlisted jurisdictions is provided below in Table 63. The results for each of the reviewed jurisdictions are included in Appendix B.

Table 63: Information Compiled for the Jurisdictional Review

Topic	Jurisdiction Information Requests	Sub-Topics
Demographics	What are the demographics of the residents you service: population, density, households, multi-family buildings (if significant) and seasonal residents?	Pop., Density (/km^2), Households, Seasonality
Governance Structure	What is your governance structure: upper tier and lower tier, and what are the responsibilities and roles with respect to waste management for each tier?	Upper/Lower Tiers
Performance	What is your 2018 diversion rate (via RPRA) and municipal grouping? Do you calculate or track your own diversion rate? Do you have a diversion target or goal? What are the kg/capita you manage per year per waste stream (garbage disposed, recycling marketed, organics composted)?	Diversion % (RPRA 2018), Municipal Grouping Tonnes managed by waste streams (kg/cap)
Facilities	What waste management facilities do you operate including landfills, transfer stations, depots, public drop offs and MRFs? How many years of landfill capacity remains?	Landfills /TS MRFs /Depots
Collection	What collection service do you provide curbside and at what frequency (weekly or bi-weekly). Do you use bags, bins or carts?	Curbside and Public Drop Off (PDO)
Contracted Services	What services are contracted services to a third party?	collection, disposal, MRF, composting
Programs	What diversion programs do you currently offer, or plan to offer, such as: Blue Box, Green Bin, leaf and yard waste, mattresses, textiles, reuse, swap programs or events?	Reuse/Swap Blue Box Organics (LYW, SSO)
EPR /Stewardship	What EPR or stewardship programs do you participate in: tires, electronics, MHSW/HHW, batteries etc.?	Tires, Electronics, MHSW/HHW, Batteries
P&E	What promotion and education communications do you provide to your residents and businesses? How do you compile local feedback?	Promotion, education and feedback
Partnerships	Who do you partner or collaborate with in regards to waste management and diversion services, events or activities (upper tiers, neighbouring municipalities, associations, community groups, volunteers, students, NGOs, First Nations, charities)?	Collaborations

Topic	Jurisdiction Information Requests	Sub-Topics
Efficiencies, Cost Savings and Innovative Approaches	What innovative approaches to waste management and diversion have you implemented or are planning to? What are the cost savings or efficiencies have been implemented? What are the lessons learned?	Approach and impact
Budget	What is the annual net budget for waste management per household (or capita)?	$/hhld or $ /capita
Staff	What are your staffing resources for waste management operations?	FT, PT, intern
Strategy/Plans	Do you have a waste management strategy or plan? When it was last updated or reviewed.	Long and short term Master Plans
Policy	What bylaws, policies and incentives are in place to support waste management and diversion? Is there active enforcement, tracking and or continued education?	Bylaws
		Enforcement
		Waste Limits
Future Regulations /Policy	How have you planned for or anticipated new future provincial regulations due to the Waste Free Ontario Act?	Full Extended Producer Responsibility (MECP)
		Food and Organic Waste Framework (MECP)
		Additional Material Designation (Mattresses, Textiles, Wood etc.)
		Circular Economy (Zero waste, Reduction, Reuse, Procurement, SUPS, Construction)
Practices contributing to Diversion	What are your approaches and practices that impact or contribute most to waste diversion and participation?	Impact quantified (tonnes or %)

6.3 Best Practices from the Jurisdictional Service Review

The methodology applied in determining the best practices was described in Section 3.3.2. Based on the information compiled from the jurisdictional review, along with waste management industry experience, several common solid waste management best practices and approaches were identified. While there are numerous solid waste management best practices, Dillon has considered those that may be applicable to the size, current operations, resources and potential considerations for the municipalities and the County for this study. While the best practices that are common to several jurisdiction reviews are summarized in Table 64, the details of how each jurisdiction implements or operates the best practice is described in more detail in Appendix B.

Note that while a best practice may be common to several jurisdictions, their approaches may still vary slightly. As an example, several jurisdictions accept plastic film, such as plastic shopping bags for recycling. The operational difference shows that some may only accept it at their public drop-off depots, while others may also accept it in their Blue Box curbside collection service. Dillon identified the

collection of plastic film as a best practice since four of the six jurisdictions reviewed accept plastic film, as well as numerous other municipalities across Canada.

Table 64: Best Practices

	Relevant Services	Waste Management Best Practice	Demonstrated Jurisdictions
1	Blue Box Program	Materials accepted in their Blue Box collection includes cartons (milk, juice etc.) and Tetrapak type containers.	Oxford County, Guelph, Muskoka's, Peterborough County, Wellington, Grey County
2	Blue Box Program	Materials accepted in their Blue Box collection includes plastic film, such as plastic bags.	Oxford County, Muskoka's, Peterborough County, Wellington, Grey County
3	Blue Box Program, Collection	Blue Box curbside collection is only collected in Blue Boxes and is not accepted for curbside collection in plastic bags. Materials collected in large plastic bags are problematic at MRFs. It entangles in the equipment and increases maintenance time and reduces operational time.	Peterborough County
4	Collection	Offers a combination of curbside collection as well as multiple drop-off depot collection services. Extent of services dependant on population density.	Muskoka's, Peterborough County, Grey County
5	Collection	Mandatory Clear Bags policy for curbside garbage collection by most townships in the county. Clear garbage bags is a proving policy to improve recycling quantities and to protect the health and safety of collection workers.	Peterborough County
6	Collection	Curbside services are provided for all households throughout the jurisdiction, whether they be rurally located, seasonal or new developments.	Oxford County, Guelph, Wellington, Grey County
7	Collection	Biweekly blue box and garbage collection.	Grey County (Southgate, Owen Sound)
8	Collection, Costs, Organics, Blue Box	Some municipalities charge new developments or new residents for Blue Boxes and Green Bins. This saves capital costs for the purchase of additional new bins for new developments and new residents after the collection programs have already rolled out and have been implemented.	Grey County (Southgate, Meaford)
9	Collections, Costs, Partnerships	Curbside collection contracts are shared among multiple municipalities e.g. six municipalities in Oxford County. The pooled collection contract provides cost savings and consistent services.	Oxford County

	Relevant Services	Waste Management Best Practice	Demonstrated Jurisdictions
10	Collection, Costs	Pay As You Throw (PAYT) user pay garbage bag tags or bag limits are enforced. Bags without a pre-paid valid bag tag, or the number of bags exceeding the allowable bag limits (i.e. number of bags accepted each pick-up day) are left at the curbside and are not collected. Typically collectors leave a sticker educating the resident as to why.	Oxford County, Muskoka's, Peterborough County
11	Collection, Organics	Provides a source separated organics (SSO) such as kitchen waste collection program. The Green Bin cart type program is a curbside collection service.	Guelph, Peterborough County, Grey County (Southgate, Meaford)
12	Drop–off Depots	Availability of additional recycling collection depots supports the increase of diverted materials from the landfill due to the added convenience of service to the residents. Depots, including community located drop-off sites (e.g. used batteries boxes at libraries) also accept more materials than accepted for curbside collection, and therefore diverts more materials from landfills.	Oxford County, Guelph, Muskoka's, Peterborough County
13	Partnerships, Cost savings	Discussions with neighbouring municipalities support opportunities for program collaborations, pooled resources, added services to residents and cost savings, e.g. MHSW collection depots, organics programs.	Grey County, Guelph, Peterborough, Wellington County, Oxford County
14	P&E	Promotion and education (P&E) for the residents and business are provided under the County's communications role. This approach supports consistent and updated messaging and pooled resources under the County.	Oxford County, Peterborough County, Grey County
15	P&E	P&E websites related to waste management and diversion are extensive with useful information for the residents and or business. Waste and diversion information is well organized, thorough and provides up to date and current content and resources. Reduces the number of calls to customer service and provides clarity for residents, visitors and businesses.	Oxford County, Guelph, Muskoka's, Peterborough County, Grey County
16	P&E	Waste and recycling mobile phone application as well as an online searchable sorting website tool provides easily accessible and convenient up to date access to collections schedules, recycling sorting information and facility operating hours.	Oxford County, Guelph, Muskoka's, Peterborough County, Grey County
17	P&E	A Waste Education Centre provides a centre for education and information to the public and especially for training for schools and community group tour groups.	Oxford County, Guelph
18	P&E, Performance Targets	P&E that shares waste and diversion reports online for public viewing show progress towards meeting diversion targets and goals established in waste management strategies.	Guelph, Grey County
19	P&E, Outreach	Public liaison committees and outreach supports residents input into policy development, stakeholder engagement, challenges	Muskoka's, Grey County (Southgate)

	Relevant Services	Waste Management Best Practice	Demonstrated Jurisdictions
		and issues and opportunities to educate the residents and businesses in waste diversion initiatives or program and service improvements.	
20	Seasonal Services	Services for seasonal residents had different approaches compared to permanent residents. These included limited services such as depot drop off bins, as opposed to curbside collection.	Muskoka's, Peterborough County
21	Strategies / Plans Roadmap	A Solid Waste Management Strategy or a Master Plan, including public consultation during their development are produced for a long terms timeframe and include defined targeted diversion goals, budget and a roadmap to achieve them.	Oxford County, Guelph, Peterborough County, Grey County(Me)
22	Waste Audits	Waste characterization audits sort local waste streams (garbage, blue box, recycling, and organics) to inform the local waste management operations, progress and identifies the areas for focus.	Oxford County, Guelph, Grey County (Owen Sound)
23	Waste Audits	Waste characterization audits help determine challenges in various waste streams and diversion programs. Audits identify issues for mitigation such as contamination in blue box collection or recycling materials commonly found in the garbage stream.	Grey County (Southgate), Guelph, Oxford County, Peterborough County
24	Waste Sites	No landfill is owned nor managed by the municipalities. All waste disposal service is contracted out to a third party. To keep costs low, diversion programs are maximized.	Guelph, Grey County (Owen Sound, Meaford)
25	Waste Sites	One central active landfill accepts waste from the County municipalities/townships with several transfer stations or depots located locally. All depots transfer waste to one central landfill.	Muskoka's, Wellington, Peterborough County
26	Waste Sites, Partnerships	Diminishing capacity of landfill space was a driver for the political will to form municipal partnerships in sharing landfill facilities within a County.	Grey County, Peterborough County

7.0 Future Needs and Gaps

The ways in which waste has been managed and the types of wastes that municipalities have had to manage has changed drastically over the last 20 years. The Service Review needs to consider the ways in which the different facets of waste management that could change current operations and programs. The following sections present the quantity of waste that County municipalities are projected to manage, as well as the needs and gaps currently identified in their waste management operations, resources and approaches.

7.1 Future Needs – Tonnes Projections

Through the municipal waste background report and data compilations discussed in Section 5.0, a need to develop a long-term forecasting model to identify growth impacts across all waste service streams was identified. For the purposes of this service review, a 20-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, reviewing available waste composition data and population projection data, and using it to estimate the future total quantities of waste to be managed over the planning period.

7.1.1 Forecasted Waste Quantities

To estimate future waste quantities to be managed over the 20-year planning period, 2019 was selected as the base year. A full breakdown of tonnages by the municipality is provided in Table 65. The overall estimate of the quantity of waste generated in 2019 in each municipality was determined using the following sources:

- Residential quantities of waste landfilled and recycled by the municipality;
- BAWSR reporting forms for RPRA; and
- Landfill Annual Monitoring Reports.

Table 65: Tonnes per Municipality

Municipality	Tonnes Diverted	Tonnes Disposed
Arran-Elderslie	542	2,230
Brockton	1,098	3,136
Huron Kinloss	1,220	2,381
Kincardine	2,686	4,858
Northern Bruce	1,141	1,839
Saugeen Shores	4,001	10,169
South Bruce	776	1,348
Total Generated	11,464	25,961

It was assumed that the waste composition would remain unchanged over the 20-year planning period. However, the participation and capture rates 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 has and continues to change. Some examples of how waste is currently changing include:

- 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;
- Increased availability of single-use products (e.g., coffee capsules, stand-up pouches); and
- There is an impact due to COVID where seasonal residents are staying longer into the fall and the snowbirds did not leave this year.

The waste generation rate estimates the total quantity of materials generated or produced by an individual/unit. 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. A literature review was conducted to support the selection of an annual waste generation rate in combination with reviewing the MIC data. The findings (Table 66) show that the range in annual waste generation growth rate is 0.8% to 3.8% with the average being 2.3%. It was assumed that the increase in total waste generated over the planning period would be attributed to population growth and an annual waste generation growth rate (assumed to be 1% per year).

Table 66: Summary of Average Waste Generation Rates Found In Literature

Report	Average Annual Waste Generation Growth Rate (%)
W12A Annual Report Waste Generation Projections & Landfill Capacity Assessment, Prepared by City of London, ON (2016)	Scenario A: 1.25% Scenario B: 0.77% Scenario C: 1.72%
ISL Engineering and Land Services Capital Region Integrated Growth Management Pan Final Report (2007)	High Estimate: 3.8% Low Estimate: 1.38%
City of Kawartha Lakes Growth Management Strategy and Municipal Master Plan Project (Feb, 2012)	Average: 1.32%
Region of Waterloo Waste Management Master Plan, Interim Report No. 1 Waste Generation and Projections (Sep, 2012)	Average: 1.79%
Region of Waterloo Waste Management Master Plan, Interim Report No. 1 Waste Generation and Projections (Sep, 2012)	Per Capita Waste Generation (kg/capita): 0.79%
Toronto Long Term Waste Strategy Technical Memorandum No. 2	Single Family: 1.15% Multi-Residential: 1.75% Average: 1.37%
Toronto Long Term Waste Strategy Technical Memorandum No. 2	Low Estimate: 1.4% High Estimate: 2.75%

7.1.2 Population Trends

The population changes between 2011 and 2016, and the annual population growth or decline for each MIC municipality is presented in Table 67. The population estimates were retrieved from Townfolio, which were developed with the Bruce County Economic Development group. It is noted that municipal growth projections should be confirmed in future strategic planning and execution work based on the following:

- COVID-19 has influenced immigration and emigration trends in Bruce County in ways that are not yet fully understood and should be investigated further as this will have an impact on waste management.
- The Minister of Finance population projections differ from Townfolio; however, the Minister of Finance population projections are provided at the County level versus on lower-tier level.

Table 67: Population Trends

Year	Arran-Elderslie	Brockton	Huron Kinloss	Kincardine	Northern Bruce	Saugeen Shores	South Bruce
2011	6,810	9,432	6,790	11,174	3,744	12,661	5,685
2016	6,803	9,461	7,069	11,389	3,999	13,715	5,639
2017	6,821	9,467	7,118	11,457	4,050	13,920	5,582
2018	6,836	9,479	7,169	11,521	4,105	14,131	5,567
2019	6,865	9,488	7,226	11,593	4,153	14,347	5,571
2020	6,893	9,492	7,278	11,665	4,201	14,578	5,603
2021	6,910	9,503	7,338	11,729	4,258	14,821	5,612
% Population Change per Year	0.15%	0.08%	0.81%	0.50%	1.37%	1.71%	-0.13%

7.1.3 Population Estimates

In order to develop a population projection for the study period (2020 to 2040), the future MIC municipality's population were estimated through interpolation. In the absence of any documented forecasts for the total planning period, it was assumed that the population would continue to increase or decrease at the annual rate calculated between 2011 and 2021 and as shown in Table 67. The projected populations per municipality over the study period are shown in Table 68.

Table 68: Population Estimates

Year	Arran-Elderslie	Brockton	Huron Kinloss	Kincardine	Northern Bruce	Saugeen Shores	South Bruce
2020	6,893	9,492	7,278	11,665	4,201	14,578	5,603
2021	6,910	9,503	7,338	11,729	4,258	14,821	5,612
2022	6,920	9,510	7,397	11,787	4,316	15,074	5,605
2023	6,930	9,517	7,457	11,846	4,375	15,331	5,598
2024	6,940	9,524	7,517	11,905	4,435	15,593	5,591
2025	6,950	9,531	7,578	11,964	4,496	15,859	5,584
2026	6,960	9,538	7,639	12,023	4,558	16,130	5,577
2027	6,970	9,545	7,701	12,083	4,621	16,405	5,570
2028	6,980	9,552	7,763	12,143	4,684	16,685	5,563
2029	6,990	9,559	7,826	12,203	4,748	16,970	5,556
2030	7,000	9,566	7,889	12,264	4,813	17,260	5,549
2031	7,010	9,573	7,953	12,325	4,879	17,554	5,542
2032	7,020	9,580	8,017	12,386	4,946	17,853	5,535
2033	7,030	9,587	8,082	12,448	5,014	18,158	5,528
2034	7,040	9,594	8,147	12,510	5,083	18,468	5,521
2035	7,050	9,601	8,213	12,572	5,153	18,783	5,514
2036	7,060	9,608	8,279	12,634	5,224	19,103	5,507
2037	7,070	9,615	8,346	12,697	5,296	19,429	5,500
2038	7,080	9,622	8,413	12,760	5,369	19,760	5,493
2039	7,090	9,629	8,481	12,823	5,443	20,097	5,486
2040	7,100	9,636	8,549	12,887	5,518	20,440	5,479

7.1.4 Future Waste Stream Forecast

To estimate the future quantities of waste generated over the 20-year planning period, 2019 was used as the starting point. To carry forward from 2019 to the end of the planning period (2040), the preceding year's waste quantity was multiplied by the annual percent change in population (Table 67) and the 1% annual waste generation growth rate. A graphical representation of these forecasts is provided in Figure 5, Figure 6 and Figure 7. Figure 5, displays the estimated future tonnes diverted; Figure 6 shows the estimated future tonnes disposed and Figure 7 displays the estimated total future tonnes generated.

Figure 5: Waste Projections - Tonnes Diverted

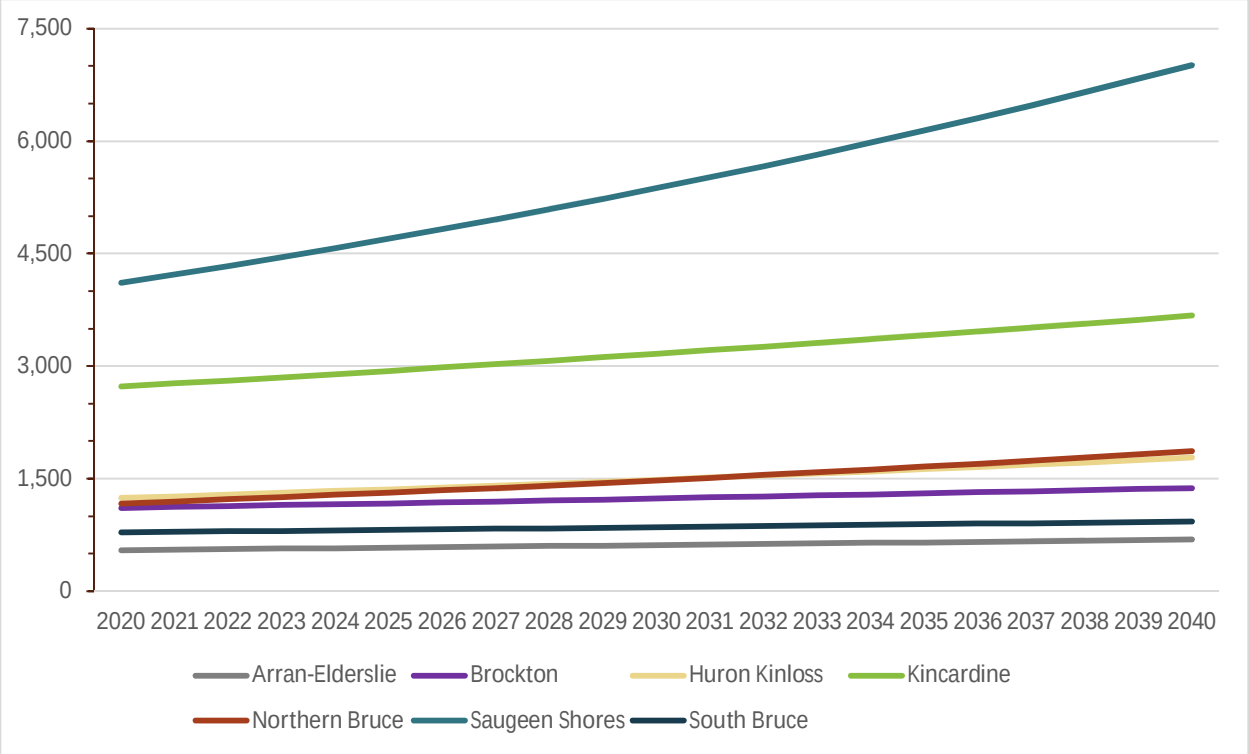


Figure 6: Waste Projections - Tonnes Disposed

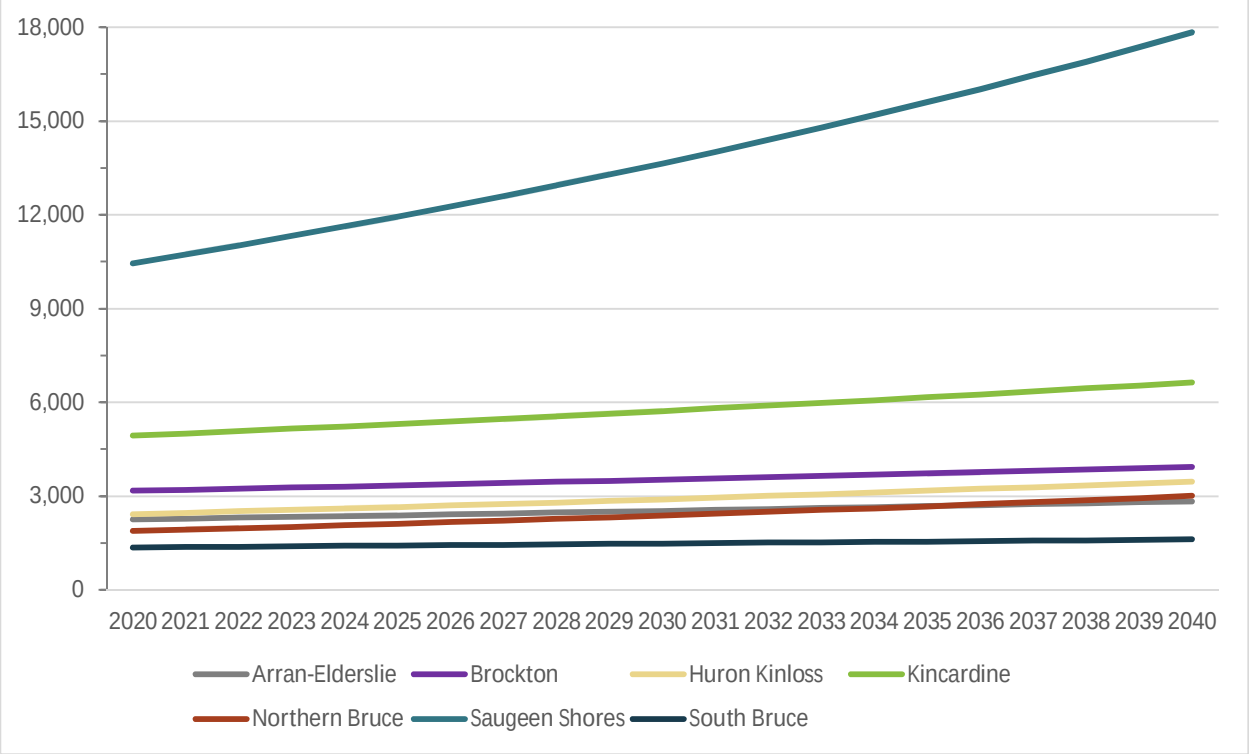
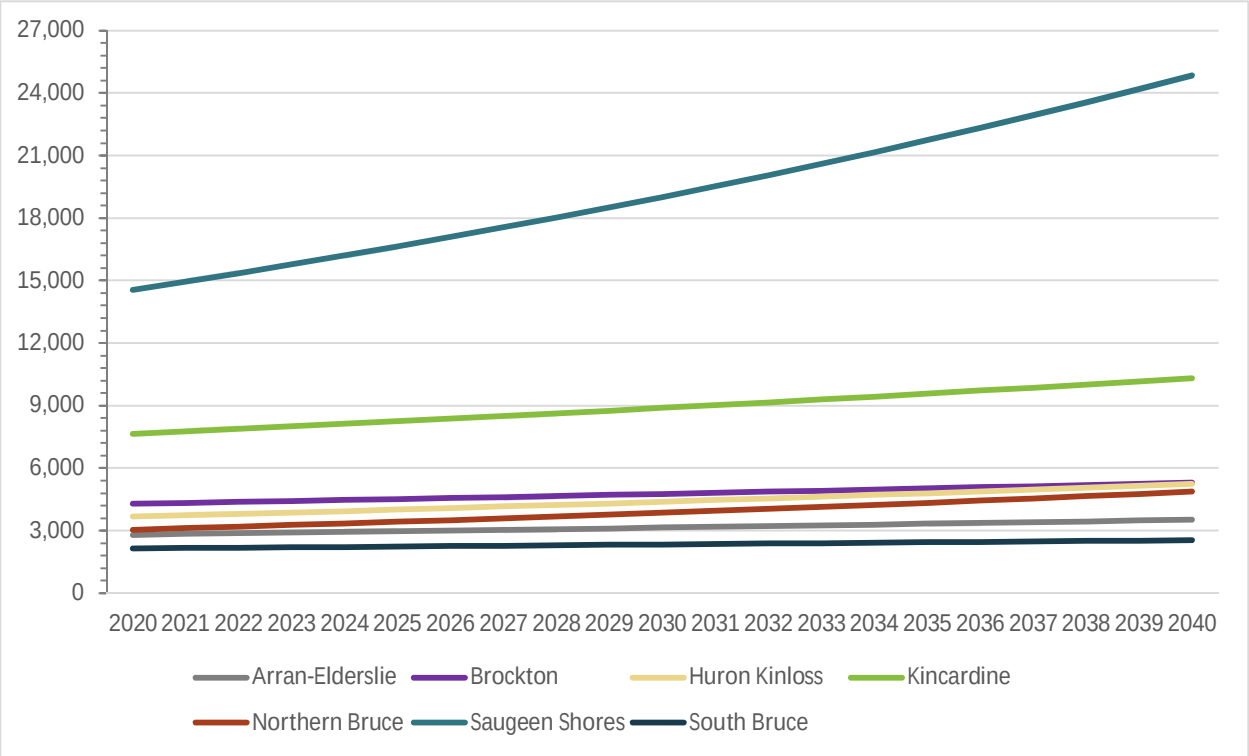


Figure 7: Waste Projections - Total Tonnes Generated



In 2019 the MIC managed approximately 40,500 tonnes of waste with almost 12,000 tonnes being diverted and 28,600 being disposed. At the end of the planning period, it is estimated that the MIC will divert approximately 17,500 tonnes and dispose of 42,000 tonnes of waste which leads to producing approximately 59,500 tonnes of waste in 2040. This is a projected increase of approximately 19,000 tonnes or 5% from 2019.

7.2 Needs and Gaps

High level future needs and gaps in the existing waste management system were developed based on the work completed in the previous service review tasks. These needs and gaps were organized into the following four categories: municipal, County, BASWR and general and are included in Table 69.

Table 69: Identified MIC Needs and Gaps

Municipal
Disposal operations efficiencies and waste management best practices are not maximized or are inconsistent across municipalities
Municipalities operate in silos, independent of each other and do not have the resources necessary to expand services, implement best practices or improve efficiencies
ECAs limit sharing of landfills and recycling or reuse sites. Reuse and swap items sites are limited to local residents due to landfill ECA restrictions listed in their approved conditions
Limited administrative diversion polices or internal practices communicated to the public with the aim to lead by example
Diversion performance improvements are limited due to municipal resources operating independently and lack of pooled resources or partnerships with neighbouring municipalities
Reuse is limited due to the distance between urban centres of the lower tiers and the requirement to drive 30 minutes to drop-off or pick up materials.
There are different levels of service expectations for residents in the lower tiers. Rural residents may not expect or want the same levels of service as the more urban areas, and similarly with cottagers and year-round residents.
Bruce County
County Waste Management Plan last updated in 1995
Limited MHSW program resources provided throughout the County
Inconsistent garbage collection policies and services across the County
Organics collection programs offered in the County except for some brush or LYW drop off
Organics composting or anaerobic digestion processing facilities do not exist in the County, except for some LYW static piles at landfills
BASWR
BASWR risks and strengths as an effective and efficient partnership are unclear
Same management structure exists since its inception and has not been reviewed or updated
Blue Box funding received from the provincial program is not maximized due to inefficient transfer of required data for reporting by BASWR to RPRA
A portion of data, i.e. tonnes diverted, is based on estimates, may be under or over reported and not verified by weigh scales in areas throughout the County.
Limited oversight and communication of BASWR performance, monitoring and funding received communicated back to the municipalities.
Residents request more types of Blue Box packaging materials recycling
General
Studies and Plans: • Understanding existing landfill capacity within the County and opportunities for shared facilities • A long term strategy on how disposed waste will be managed in the long-term throughout the region • Unverified benchmarking towards attaining a County diversion target of 50% set in 1995
Promotion & Education (P&E): • P&E content lacks targeting of current issues and trends • Delivery of P&E does not achieve full potential and reach
Blue Box program provincial transition to full EPR: • Financials baseline of current Blue box program needs preparation and understanding for decision stage in very near future • An understanding of EPR scenarios and options applicable to the region needs to be established

8.0 Options

Potential waste management options for MIC municipalities as well as the County were developed. The methodology and approach used is described in Section 3.4. The following sub sections describe the:

- Potential options that were developed;
- Evaluation criteria used to evaluate each option;
- MIC Sub Committee workshop consultation; and
- Option evaluations results.

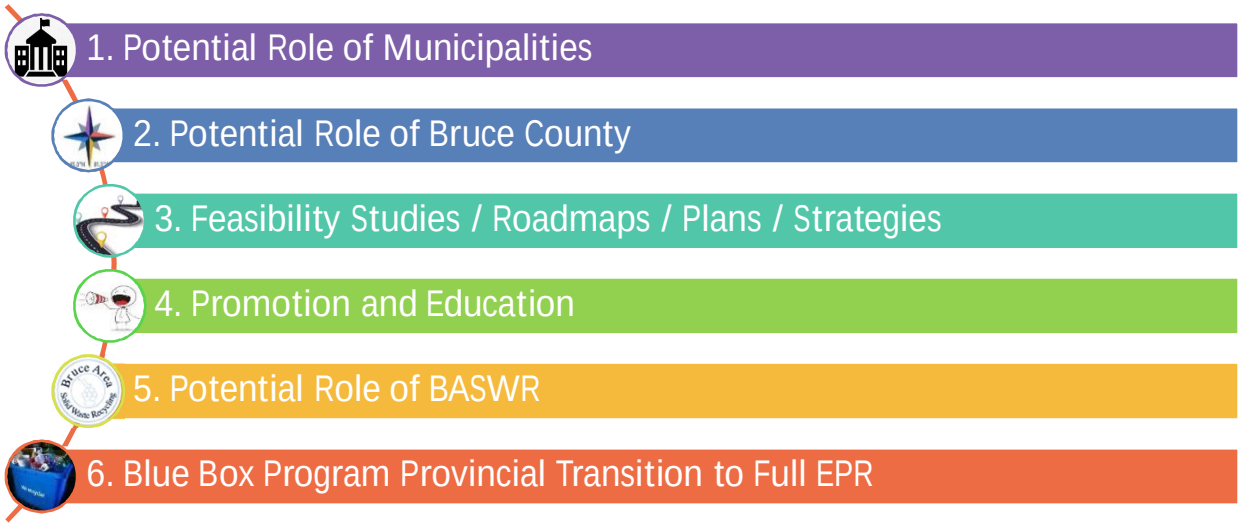
8.1 Potential Options

Along with the municipal background information of current waste services compiled in Section 5.0, the needs identified in Section 7.0 and the following waste management operations guided the development of a long list of potential options for consideration:

- Facilities and Infrastructure;
- Collection;
- Diversion and Waste Reduction;
- Policy and Regulations;
- Promotion and Education;
- Compliance and Enforcement; and
- Performance, Targets, Data, Monitoring and Reporting.

From the long list of options, six categories were derived based on common groups for applicable options. The six categories are presented in Figure 8.

Figure 8: Option Categories



The 25 options finalized for evaluation with input and approval from the MIC Sub Committee are provided in Table 70.

Table 70: Option List by Category

#	Potential Option by Category
Category 1: Potential Role of Municipalities Options	
1	Implement Disposal Site Efficiencies
2	Enhance Municipal Collaboration and Partnerships
3	Increase opportunities to reuse and sharing participation
4	Lead by example of 3R initiatives and policies
5	Explore construction and demolition waste diversion initiatives
6	Explore LEED design incentives for new development approvals
Category 2: Potential Role of Bruce County Options	
7	Update County Waste Management Strategy Master Plan
8	Expand MHSW program
9	Transfer diversion programs to County's responsibility
10	Transfer waste collection to County's responsibility
Category 3: Feasibility Studies / Roadmaps / Plans / Strategies Options	
11	Implement County organics collection program (LYW, SSO)
12	Determine processing options for County organics
13	Transfer all waste management roles to Bruce County
14	Each Municipality Determines their Long-Term Waste Disposal Needs
15	Verify monitoring and reporting data
16	Identify level of capacity/resources required at the County level to administer and manage any new County waste management roles
Category 4: Promotion and Education (P&E) Options	
17	Update P&E messaging to current issues
18	Implement best practices on P&E delivery
Category 5: Potential Role of BASWR	
19	Conduct a business review on BASWR
20	BASWR management structure review and update
21	Develop a template for municipalities to report to BASWR
22	Use weight based data instead of estimates
23	Explore shared weigh scale potential partnerships
Category 6: Blue Box Program Provincial Transition to Full EPR	
24	Prepare current state financials in preparation for decision making for transition
25	Internally assess EPR scenarios and expanded blue box program

8.2 Criteria for Option Evaluations

The evaluation criteria was developed in collaboration with MIC Sub Committee representatives during a virtual workshop and approved by the MIC in September. The methodology to develop the criteria is described in Section 3.4. Table 71 presents the criteria and indicators used to evaluate the options along with descriptions of rationale to give for negative, neutral and positive impacts.

Table 71: Evaluation Criteria - Financial, Environmental and Social

Criteria	Indicators	Negative Impact	Neutral Impact	Positive Impact
Financial Impact/Benefit				
Cost Sharing Potential	Potential to partner with other municipalities/ organizations and share costs for the option.	No potential to share option's costs with other municipalities/ organizations.	Low potential or limited ability to share option's costs with other municipalities/ organizations.	High potential to share option's costs with other municipalities/ organizations.
Overall Option Costs	Estimated net capital and operating cost and/or revenue potential (per year)	High capital costs (range: >$100,000). Increases in operating costs (range: >$2,500). No revenue potential (range: $0).	Medium capital costs (range: $100,000 to $2,500). Minimal to no change to current operating costs (range: $2,500 to $0). Minimal revenue potential (range: $2,500 to $0).	Minimal to no capital costs (range: <$2,500). Potential to reduce operating costs (range: >$2,500). Potential for revenue generation (range: >$2,500).
Environmental Impact/Benefit				
Regulatory Compliance	Impact on regulatory compliance needs, including approvals, amendments and/or reporting.	Option involves complex and lengthy changes to and/or new approvals, reporting and meeting regulatory compliances.	No perceived changes or challenges to achieve regulatory compliance.	Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting.
Climate Change and Waste Diversion	Potential impacts to GHG emission generation and waste diversion from landfill.	Increase of GHG emissions to atmosphere. No impact on waste diversion.	Minimal to no additional GHG emissions produced. Potential for some waste diversion.	Reduces GHG emission to air. Potential for significant waste diversion from landfill.
Social Impact/Benefit				
Public Acceptance	Potential for public acceptance, buy-in and participation in option	High public resistance to option implementation.	Public will not likely be impacted by the option.	Low potential for public resistance to option implementation.
Social Equality (i.e. service level, convenience, jobs)	Potential for unequal impacts/benefits to specific groups or communities	Potential for option to have unequal impacts on residents/ stakeholders.	Option is available to everyone equally.	Increased equality when compared to current situation.

8.3 Options Evaluations

The 25 options that were finalized were evaluated against the finalized criteria. Table 72, below, provides the evaluation that was reviewed and received approval from the MIC Sub Committee. Options that had a negative outcome is in red font; options that had a positive outcome is in blue font; options that had a neutral impact is in black font. The options evaluation has been completed at a high level, as per the scope of this project. There is a need for further analysis around the projected additional needs for staff, equipment, taxes (levied by the municipalities) and user fees. Each option's cost and resources indicated below are an estimated requirement.

Table 72: High Level Evaluation of Potential Options Applying Triple Bottom Line Evaluation Criteria

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
Category 1: Potential Municipal Options				
1. Implement Disposal Site Efficiencies				
Description and Assumptions	This option looks at each municipality optimizing their waste disposal site operations by implementing efficiencies which may include improved diversion tactics, and improved compaction/staging/cell management at waste disposal sites. Additional studies are required to determine how each site can be optimized. Costs will be dependent on each site and may include capital cost improvements such as equipment, scales, depots and environmental controls. Capital costs are not included in the options costs due to unknown variables of each waste disposal sites.			
High Level Evaluation	A) Low potential for cost sharing as option looks at maintaining and optimizing individual waste disposal sites. High potential for cost sharing if implemented County wide. B) High capital costs. Additional studies required to determine how each site can be optimized. Costs will depend on each site; may include capital cost	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Supports sites' ECA compliance as option will align with conditions in ECAs. B) Reduces GHG emission to air. Potential for significant waste diversion from landfill. Positive impact to GHG avoidance and increased waste diversion	A) Low potential for public resistance to option implementation. Positive public perception in efficient management and operation of their local waste facilities and services. B) Increased equality when compared to current situation. Option looks at implementing efficiencies at all municipal sites	Requires funding and resources from each municipality for their site(s). It is anticipated that each site will require up to 2 days of time, per site, during the study completion to assist with the study. $5,000 to $10,000 per site for a consultant to complete an initial site review and identify improvement opportunities /

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	improvements (environmental control, water management, scales, permanent depot), equipment (compactor, loader, densifier, sorting bins). Anticipated to have long term savings in operating costs given the focus on optimizing operations.	performance due to increase in operational efficiencies. High potential for municipalities supporting the County's waste diversion target of 50% set in 1995.	and therefore option is equal to all.	recommendations. This includes review sites, site visits, discussions with operators and developing a high level list of recommendations for improvement with budget estimates for implementing (or identification of further studies required). Additional capital costs based on study findings.
2. Enhance Municipal Collaboration and Partnerships				
Description and Assumptions	This option looks to enhance partnerships through collaborations with neighbouring municipalities and to look for opportunities to share resources and find cost efficiencies through landfill/diversion equipment (e.g., facilities, scales), collection contracts and programming (e.g., promotion and education efforts.			
High Level Evaluation	A) High potential for cost sharing of facilities, equipment (e.g. scales, densifiers, mobile depots) and/or programs (polystyrene collection) and services (contracts, promotion and education). High potential for cost sharing if implemented County wide. Increased cost of travelling further distances and/or shipping costs.	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Collaboration supports improved waste management resources, which supports efficient use of landfill space, ECA compliance and provincial long term regulatory goals. Requires update to MECP ECA which will trigger the requirement to be in compliance with new regulations as existing sites are only able to accept waste from within own municipalities	A) High public resistance to option implementation. Potential for public resistance to share valuable resources (such as landfills with long remaining airspace capacity). Potential for positive public acceptance for municipalities finding ways to reduce costs and increase convenience through shared facilities, equipment and/or programs.	Requires staffing resources from each of the municipalities and the County for meetings and time related to exploring resource and cost efficiencies. Depending on what is being reviewed, this could be approximately a day a week per municipality.

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	B) Minimal to no capital costs to enhance municipal collaboration. Costs savings achieved for shared services or activities. Cost savings due to extended life of landfill which saves on air space.	B) May reduce GHG emission to air (dependent on if there are increased shipping distances). Potential for significant waste diversion from landfill. Positive impact to GHG avoidance and increased waste diversion due to pooling of equipment and resources.	B) Increased equality when compared to current situation. Perception of shared resources across municipal neighbours and balance of resources for municipalities that do not have the resources for additional or expanded services.	
3. Increase Opportunities for Reuse and Sharing Participation				
Description and Assumptions	This option looks at increasing opportunities for reuse and sharing participation within municipalities. This option would involve staff promoting and coordinating reuse and sharing initiatives through use of municipal facilities and events. Additionally, this could include sharing various events and initiatives but keeping the actual initiative local (e.g., move the organizer of the event from municipality to municipality such as MHSW days or off-site collection locations).			
High Level Evaluation	A) Neutral potential for cost sharing as option looks at individual municipal opportunities for reuse. High potential for cost sharing if implemented County wide. B) Increase in costs anticipated for staff to coordinate and implement reuse and sharing site space/depot/events. Estimate 10% increase of Municipal Waste Management staff time devoted towards current reuse activities.	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Supports provincial MECP goals of 3Rs (Reduce, Reuse, Recycle) and long term progressive diversion targets in the Waste Free Ontario Act. B) May reduce GHG emission to air (dependent on if there are increased shipping distances). Potential for significant waste diversion from landfill. Increased reuse of waste increases GHG avoidance and increases waste diversion from landfill.	A) Low potential for public resistance to option implementation. Potential for positive public acceptance for reuse and shared events or opportunities. B) Increased equality when compared to current situation. Increased equality among all residents as opportunities to obtain or share reusable goods instead of purchasing new is provided to all residents.	Requires staffing resources from each of the municipalities. Estimated 0.5 days per week per municipality devoted towards current reuse activities.

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
		High potential for municipalities supporting the County's waste diversion target of 50% set in 1995. Supporting reuse and sharing economies aligns with municipal Climate Change strategies, where applicable.		
4. Lead by Example of 3R Initiatives and Policies				
Description and Assumptions	This option looks to develop internal circular economy and 3Rs initiatives and policies. The policies and initiatives would include procurement, single-use plastics, reduction of waste and increasing reuse of materials. An estimated half a day per month of staff time would be required to develop and implement new policies and initiatives related to 3R, including training staff and preparation of communications materials. It is recommended that information sharing between municipalities occur to further generate new and innovative approaches to developing internal procedures and policies.			
High Level Evaluation	A) Low potential for cost sharing as option looks at individual municipal approaches to implement 3Rs initiatives. High potential for cost sharing if implemented County wide. Potential to collaborate on the internet by having one County-wide site that advertises with links to all of the municipalities. Cost sharing as County-wide events are all planned at once by all versus individually. B) No estimated capital cost. Increases to operating costs for municipal staff and procurement	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Supports province goals of creating a circular economy and increasing 3Rs (Reduce, Reuse, Recycle) initiatives, especially through green procurement. B) Reduces GHG emission to air. Potential for significant waste diversion from landfill. Increased 3Rs initiatives and diversion of waste and resources from landfill increases GHG avoidance.	A) Low potential for public resistance to option implementation. Potential for positive public perception of municipal administration and performance when they lead by example. B) Increased equality when compared to current situation. Supports equal expectation of local waste diversion expectations when the administration leads by example.	Requires staffing resources from each of the municipalities. Estimated 0.5 days of Municipal Waste Management staff time per month per municipality. Alternatively, the municipalities could retain a consultant to assist with developing 3Rs initiatives and policies which is estimated to cost between $30,000 and $40,000, depending on the project scope including level of engagement. Ongoing staffing needs are estimated to require

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	to develop new policies, train staff on new initiatives and adjust procurement specifications for more sustainable purchasing and communication of their initiatives.; 0.5 days per month ongoing for Municipal Waste Management staff.	High potential for municipalities supporting the County's waste diversion target of 50% set in 1995. Supporting reuse and sharing economies aligns with municipal Climate Change strategies, where applicable.		approximately half a day per month per municipality.
5. Explore Construction and Demolition (C&D) Waste Diversion Initiatives				
Description and Assumptions	This option looks at exploring construction and demolition (C&D) waste diversion initiatives. Currently there are limited C&D diversion options. Implemented C&D diversion options vary among local municipal landfills. Clean wood, shingles, metals are some C&D materials that have diversion activities, though they are not mandated. Some landfill tipping fees charge higher rates for non-sorted waste loads as an incentive to sort C&D waste. The C&D sector is growing in the region and in turn, increasing tonnes of C&D waste are received at local landfills. Additional initiatives focused on C&D waste diversion from landfill are necessary to achieve recovery of these resources. This option may be implemented in conjunction with Option #6 below.			
High Level Evaluation	A) No potential or limited ability for cost sharing if implemented only on individual municipal basis, rather than County wide or municipal partnership. High potential for cost sharing if exploration of C&D initiatives were implemented County wide, or if resources are pooled among municipal partnerships. B) Minimal to no capital costs to explore C&D initiatives. Increase in operating cost by municipal waste staff to explore	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. C&D initiatives would support provincial long term goals set out in the 2017 Strategy for a Waste-Free Ontario. Objective 3: Increase Waste Reduction and Improve Resource Productivity. C&D is named as one of the top "three large waste streams that will require extra effort and targeted action". B) Reduces GHG emission to air. High potential to reduce GHG impacts and	A) Low potential for public resistance to option implementation. Positive public acceptance in diverting large quantities of C&D waste from their local landfills and recovering resources. Potential for high resistance from the construction industry sector. Potential for high public resistance due to perceived expectation of increase in illegal dumping.	Requires staffing resources from each of the municipalities. Municipalities can complete internally at an estimate 40 to 80 hours for one staff member per municipality to work together to develop solutions and then an estimated 1 to 2 days per month per municipality for ongoing maintenance would be required.

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	and assess local C&D initiatives on an ongoing basis. Individual municipal site initiatives would be explored by its own operating staff No revenue potential due to loss of tipping fees for C&D waste disposal at local landfills. Potential for revenue generation if fines are implemented as a deterrent. Potential for cost savings by extending life of the landfill (uses less air space).	waste diversion in the construction, demolition and renovation sector which has increasing growth activities in the region. Potential for significant waste diversion from landfill. High potential for municipalities supporting the County's waste diversion target of 50% set in 1995. High potential to preserve valuable landfill airspace.	B) Increased equality when compared to current situation. Perceived as an equal expectation for all local construction, demolition and renovation activities for residential, industrial, commercial and institutional (ICI) sectors.	Alternatively a consultant could be retained to complete the initial scan to identify opportunities for an estimated $15,000 to $30,000. An estimated 1 to 2 days per month per municipality for ongoing maintenance would be required.
6. Explore LEED Design Incentives Associated With C&D Waste Management for New Development Approvals and Permits				
Description and Assumptions	This option looks at exploring LEED® design incentives, associated with C&D waste reduction, waste management and resource recovery, for new local development applications, approvals and permits. LEED®, or Leadership in Energy and Environmental Design, is the green building rating system, available for virtually all building, community, and home-project types.[i] Note that Planning and Development administration crosses both municipal and County level jurisdictions and they support each other. This option may be implemented in conjunction with Option #5 above.			
High Level Evaluation	A) High potential for cost sharing as the County currently supports municipalities in their Planning and Development activities and administration. B) Minimal to no capital costs to explore LEED design initiatives. Increase in operating costs by municipal waste management staff and planning department	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. C&D initiatives would support provincial long term goals set out in the 2017 Strategy for a Waste-Free Ontario. Objective 3: Increase Waste Reduction and Improve Resource Productivity. C&D is named as one of the top "three large waste streams	A) Low potential for public resistance to option implementation. Positive public acceptance in establishing sustainable construction design standards and waste reduction for builders and constructors in their municipality. Potential for resistance from developers.	It is estimated that there would be approximately one to two days per month, per municipality (depending on C&D activity) for either solid waste staff of planning to review permits and approvals for conformance with LEED.

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	staff to update approval application templates with C&D waste reduction sections and bylaw updates. No revenue potential due to loss of C&D tipping fees for disposal.	that will require extra effort and targeted action". B) Reduces GHG emission to air. High potential to reduce GHG impacts and environmental footprint due to construction and renovation growing activities in the region. Potential for significant waste diversion from landfill. High potential for municipalities supporting the County's waste diversion target of 50% set in 1995. High potential to preserve valuable landfill airspace.	High potential public resistance due to perceived expectation of increase in illegal dumping. B) Increased equality when compared to current situation. Improved and sustainable development specifications perceived as a requirement and expectation applied to all new local developments.	
Category 2: Potential Role of Bruce County Options				
7. Update County Waste Management Strategy Master Plan				
Description and Assumptions	This option looks at reviewing the progress set out in County's 1995 SWMP strategy and developing a long term (30 years) Solid Waste Management Strategy. The updated strategy could be developed in-house with County staff or through a retained third party consultant. The study would review the progress made by the County on achieving the County's SWMP 50% diversion target. Historical Annual Monitoring Reports (AMRs) should be compiled for the study and peer reviewed. The strategy should be reviewed and updated at a minimum every 5-10 years. The estimated cost of the updated strategy excludes public consultation. Typically a strategy requires a year or more to develop and also requires council approval. Local waste characterization audits typically support the needs assessment and growth analysis in the strategy development. Audit costs are not included in the estimated strategy cost. As part of this strategy MIC may consider reviewing and investigating the benefits and draw-back of wheeled carts.			
High Level Evaluation	A) Anticipated that costs to develop a County long term strategy with targets and timelines would be paid for by	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Development of a long term strategy would help plan for and support	A) Low potential for public resistance to option implementation. Positive public perception anticipated with the County developing a long term	Requires staffing resources from the County and each of the municipalities. If the strategy is completed in house it will require up to a full day

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	the County. Municipalities would end up paying through taxes. B) No capital costs applicable to updating the Strategy. Increases to operating costs to develop a County strategy could be 1. In-house staff or 2. In-house staff with support from a waste management consultant or 3. outsourced to a consultant (estimate high capital costs)	provincial long term diversion goals and new EPR and organics regulations and create a roadmap to achieve them. B) Reduces GHG emission to air. Potential for significant waste diversion from landfill. Development of a long term strategy can align with local climate change goals when developing potential ways to manage the future waste management system.	plan with goals, targets including a timeline and road map on the way forward. The public can be engaged throughout the development of the plan. B) Increased equality when compared to current situation. A County strategy could be developed with social equality being top of mind when putting forward potential options for the future waste management system. A strategy can also equalize and normalize waste management services expectations across the County. Potential for perceived reduced level of direct local control on specific components of their local waste services, facilities and jobs.	per week per municipality and the County over several months. If completed in-house with support from a consultant it will require up to a half day per week per municipality and between $30,000 and $50,000 for the consultant. If completed entirely by a consultant it will require up to a half day per month per municipality and the County and between $75,000 and $100,000 depending on the project scope. These estimated costs do not include costs for any engagement.
8. Expand MHSW Program				
Description and Assumptions	This option looks to increase the number of MHSW events, collect additional materials (e.g., donations, textiles) and implement either a permanent MHSW depot or rotational mobile MHSW depot. The mobile service could be a trailer, sea-can or large vehicle that could rotate between municipalities and could be stationed at landfill sites. Landfill ECA's may require an amendment to house a mobile depot. Increased cost to expanding the MHSW program would include adding more MHSW events, purchasing a mobile depot, developing communication materials and additional staff time dedicated to developing partnerships for reuse opportunities such as tool libraries. MHSW events can also be used to expand promotion and education opportunities for all diversion programs by distributing surveys at events to gather public feedback on diversion programs.			

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
High Level Evaluation	A) High potential to share option's costs with other municipalities/ organizations. MHSW is currently a County role. Expanded services would be shared County wide. Share a mobile/ permanent MHSW depot throughout county. Shared County staff/resources for MHSW program. B) Low to medium capital costs to purchase new mobile depot. Increased operational costs for an expanded MHSW program (more MHSW events, new mobile depot, increased communication, more County Waste Management staff time, more partnerships (e.g. libraries). Estimated an additional 0.5 days per month ongoing for County Waste Management staff.	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Expanded MHSW collection supports mandated diversion of MHSW (designated materials) from municipal non-hazardous landfills per provincial regulations. B) Reduces GHG emission to air. Potential for significant waste diversion from landfill. Avoids GHG emissions due to collection being mobile and therefore residents would travel less distance to safely dispose of their MHSW. Increased collection, proper disposal and or recycling of MHSW designated materials. Supporting reuse and sharing economies aligns with municipal Climate Change strategies, where applicable.	A) Low potential for public resistance to option implementation. Positive perception of increased level of service for MHSW collection plus potential partnership opportunities. B) Increased equality when compared to current situation. Positive perception of equal services for all County residents. Positive perception of a permanent/mobile MHSW drop off depot, especially for seasonal residents currently limited to MHSW half day events only.	As an initial step this requires approximately 40 hours per municipality to review potential options and come up with an implementation plan on what/when options are implemented. Alternatively, a consultant could complete this for approximately $10,000 to $20,000. Requires ongoing staffing resources from the County. It is estimated that this will entail an additional 0.5 days per month for the management of the MHSW events and then up to 3 days for the planning and attendance at each event. It is estimated that the purchase of a new mobile depot will require capital costs of approximately $15,000 to $30,000, depending on the size and customization for MHSW materials. It is estimated that the cost per event will be $13,000 with $5,500 in funding being

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				received per each event (based on 2019 County MHSW data). If a permanent depot(s) is selected there will be capital costs such as purchasing land, building depot and equipment. There will also be operating costs such as disposal, maintenance and utility costs and staffing costs. Operating costs would be dependent on the number of days that the depot is open.
9. Transfer Diversion Programs to County's Responsibility				
Description and Assumptions	This option looks to expand County jurisdictional roles and responsibilities to include oversight and management of all diversion operations for Bruce County. This would shift the responsibility of procurement and delivery of diversion programs from the individual municipalities to the County, including services such as recycling and a potential future organics collection program. The County would also oversee the provincial Blue Box Datacall reporting and other programs, including recycling.			
High Level Evaluation	A) If costs are municipalities' responsibilities than high cost sharing potential under one County-wide collection contract for recycling and potentially for organics collection in the future (food waste and/or leaf and yard waste).Potential to merge recycling and/or organics collection service with garbage	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. One County contract supports compliance of collection contract terms and performance under future provincial mandates such as Food Waste and EPR. B) Reduces GHG emission to air.	A) High public resistance to option implementation. Perceived reduced level of direct local control on specific components (e.g., procurement, collection frequency, items collected) of the residential curbside program.	These funding and resource requirements are in conjunction with Option 10. Requires staffing resources from the County. It is estimated that 2 to 3 full-time positions will be required for the County to manage these programs.

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	collection contract. If costs are the County's responsibilities than municipalities would end up paying through taxes. B) Minimal to no capital costs Potential to reduce operating costs. County diversion collection contract costs, (potentially via a third party service contract), can be redistributed across municipalities prorated by households served.	Potential for significant waste diversion from landfill. Potential for collection route optimization County-wide and use of efficient collection vehicles.	B) Increased equality when compared to current situation. Positive perception of equal service levels for County residents.	As these programs were managed as part of many roles and responsibilities of staff at each of the municipalities it is not anticipated that any positions will be eliminated.
10. Transfer Waste Collection to County's Responsibility				
Description and Assumptions	This option looks to expand County jurisdictional roles and responsibilities to include curbside collection. Transferring collections to the County would consist of a standard level of service for every household in the County, except potentially seasonal households, with feasible and consistent policies to improve diversion (e.g., bag tags, bag limits, and clear bags). There is a potential to merge garbage collection with recycling and/or future organics collection to optimize collection routes. The County could procure collection contracts for all municipalities and redistribute costs on a per household basis.			
High Level Evaluation	A) High cost sharing under one County wide collection contract for garbage Potential to merge garbage collection service with recycling and/or organics collection contract. B) Minimal to no capital costs	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. One County contract supports compliance of collection contract terms and performance with regulatory requirements. B) Reduces GHG emission to air.	A) High public resistance to option implementation. Perceived reduced level of direct local control on specific components of the residential curbside program B) Increased equality when compared to current situation.	These funding and resource requirements are in conjunction with Option 9. Requires staffing resources from the County. It is estimated that 2 to 3 full-time solid waste positions will be required for the County to

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	Potential to reduce operating costs. County diversion collection contract costs, (potentially via a third party service contract), can be redistributed across municipalities prorated by households served.	Potential for significant waste diversion from landfill. One County contract reduces GHG due to efficiency in collection, less vehicle fuel and emissions due to less collection vehicles and efficient transfer of waste streams. Potential to change collection schedule to increase recycling and decrease garbage pickup frequency.	Positive perception of equal services for all County residents, shared resources allowing for increased services provided across the County and efficient integrated updated waste management. Some municipalities may feel that they do not need to receive the same level of service as other municipalities and as a result are overpaying or subsidizing other municipalities.	manage these programs. It is also estimated that this will increase the customer service calls and the County may consider all calls being directed towards solid waste and retaining a dedicated customer service person, or to include this as part of the County's existing customer service staff roles and responsibilities. As these programs were managed as part of many roles and responsibilities of staff at each of the municipalities it is not anticipated that any of the positions will be eliminated.
Category 3: Feasibility Studies / Roadmaps / Plans / Strategies Options				
11. Implement County Organics Collection Program (LYW, SSO)				
Description and Assumptions	This option looks to complete an organics program feasibility study to meet pending food and organic waste provincial targets and/or increase diversion of organics through an organics collection program. The study would be completed by a third party waste management consultant and would determine future requirements and capacity of organics material collected through the addition of the program. The assessment would recommend priority next steps and potential options for an organics collection program and associated estimated high level costs. Individual municipalities with a population under 50,000 would not be mandated to provide curbside organics program under future legislation; however, if the responsibility shifted to the County, there would be a mandated program.			
High Level Evaluation	A) High cost sharing potential for a County wide organics collection program through shared	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. The Province is moving forward with	A) Low potential for public resistance to option implementation. Public perception may be mixed with a	The first step to complete the feasibility study requires minimal staffing resources from the County. It is estimated that

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	collection contract and/or shared organic waste processing facility. B) Minimal to no capital costs. Increased operating costs to conduct a feasibility study (estimate medium capital costs) to identify options for the collection and processing of organic waste including site selection.	the Food and Organic Waste Diversion Policy Statement. Implementation of an organics program will help achieve the Provinces plus the County's diversion targets. B) Reduces GHG emission to air. Potential for significant waste diversion from landfill. Implementation of an organics collection program greatly reduces net waste management GHG emissions due to collection of organics (food and leaf and yard waste) and diversion from landfill. Potential for significant waste diversion from landfill. High potential for municipalities supporting the County's waste diversion target of 50% set in 1995.	new collection program, potential new employment opportunities with the collection and processing of organic waste. Potential for initial resistance to organics program participation due to potential perceived nuisance issues (e.g. odours, pests, and vermin). B) Increased equality when compared to current situation. Addresses a community program/service expectation as in other communities in Ontario.	this will entail an additional 1 to 2 days per month while the study is being completed for each municipality. It is estimated that the cost for a consultant to complete the study will be between $40,000 and $60,000. Based on the results of the study additional staffing and resources may be required. It is anticipated that the study will detail these additional costs. It is noted that this option could be done in conjunction with Option 12 with potential cost savings in doing so.
12. Determine Processing Options for County Organics				
Description and Assumptions	This option looks at completing an organics feasibility study for processing/technologies, which may include public/private partnerships. The feasibility study would be conducted by a consultant and would involve identifying options for organics processing within the County. The assessment would recommend priority next steps and potential options for organics processing and associated estimated high level costs.			
High Level Evaluation	A) County members can share the costs to conduct a feasibility study for a new organics processing facility.	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Achieve compliance with an	A) Low potential for public resistance to option implementation. Employment associated with the operation of a new proposed composting facility	The first step to complete the feasibility study requires minimal staffing resources from the County. It is estimated that this will entail an additional 1

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	B) Minimal to no capital costs Increased operating costs for feasibility study (estimate medium capital costs) to identify options of an organics processing (food waste and leaf and yard, agricultural waste), either County owned and operated or third party	anticipated provincial regulation regarding organic waste Implementation would contribute to the Province's overall waste diversion goal and reduce regional disposal rate B) Reduces GHG emission to air. Potential for significant waste diversion from landfill. Implementation of an organics program greatly reduces net waste management GHG emissions due to organics (food and leaf and yard waste) processing into a quality compost or digestate end product for sale Potential for significant waste diversion from landfill. High potential for municipalities supporting the County's waste diversion target of 50% set in 1995.	Processing facility siting opposition from the public/neighbours B) Increased equality when compared to current situation. Address a community program/service expectation as in other communities in Ontario	day per month while the study is being completed for each municipality. It is estimated that the cost for a consultant to complete the study will be between $30,000 and $50,000. Based on the results of the study additional staffing and resources may be required. It is anticipated that the study will detail these additional costs. It is noted that this option could be done in conjunction with Option 11 with potential cost savings in doing so.
13. Transfer all waste management roles to Bruce County				
	A) see options 9 -12 B) see options 9 -12	A) see options 9 -12 B) see options 9 -12	A) see options 9 -12 B) see options 9 -12	N/A
14. Each Municipality Determines their Long-Term Waste Disposal Needs				
Description and Assumptions	This option looks at each municipality determining their individual long-term solid waste management needs over the next 20-30 years. Some municipalities (e.g. Saugeen Shores) have recently updated their waste needs assessment and would not require another study, nor partner with another municipality to share a study tender. The option outcome would be an updated solid waste management needs report by each municipality. Assume this option is not carried out under a County lens. See Category 2 for County options.			

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
High Level Evaluation	A) Low potential for shared costs as each municipality would carry out their own individual disposal needs assessment study. High potential to share option's costs for the waste disposal needs solutions with other municipalities. B) No capital costs. Increase in operating cost for a municipal waste needs assessment study by a third party consultant in addition to municipal solid waste management staff time to support the consultant's study. No revenue potential due to completing the study.	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Supports compliance of the municipal jurisdictional responsibility in providing and planning for residential solid waste management services. B) Minimal to no additional GHG emissions produced by carrying out a needs assessment study. No impact on waste diversion by completing the study.	A) High public resistance to option implementation. Potential for public resistance on where and what kind of facility(ies) are used for residual waste management. B) Potential for option to have unequal impacts on residents/stakeholders. Identification of individual municipal needs may not be seen by public as equal or at the same service level as their neighbours or other Counties, (e.g. remaining landfill airspace, expanded Blue Box materials collection or organics programs).	Requires staffing resources from each of the municipalities to determine individual disposal priorities. It is estimated that this will require 2 to 4 days of time per municipality during a municipal waste needs assessment study. It is estimated that the cost for a consultant to complete a municipal waste needs assessment study for each municipality will be between $5,000 and $10,000 per study.
15. Verify Monitoring and Reporting Data				
Description and Assumptions	This options looks at verification of existing waste related data and metrics currently used in solid waste management monitoring and reporting. The option's outcome would produce an updated and standardized set of consistent metrics used by municipal waste staff (metric measurement units, material density, compaction ratios, volume estimation, bin volumes, diversion calculations, disposal rates, GHG, residential vs commercial waste ratios, airspace fill rates, rolling annual averages, material definitions, waste characterization audits, promotion and education metrics, reuse metrics). This allows for effective apples to apples comparisons when considering future planning and decision making. This option can be implemented in conjunction with Options #21, #22 and #23.			

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
High Level Evaluation	A) Potential for shared municipal costs and waste staff time in developing a common set of municipal solid waste data metrics (e.g., compaction ratios, updated density rates, diversion calculations). B) There will be approximately three days of waste management staff time to develop consistent data metrics and templates used in landfill annual monitoring reports, waste reporting and bench marking.	A) Provides an opportunity to develop consistent metrics to track performance under existing and proposed new waste related regulations. B) No GHG impacts from the activity of updating the metrics, but potential to develop metrics that align with climate change goals within the County.	A) Positive public acceptance in more accurate waste management reporting for their jurisdiction. B) Positive social equality impacted by applying fair and updated standardized solid waste management data metrics across all jurisdictions.	Estimated 1 day of time per municipality plus 3 days of time for one person to develop the metrics and templates. Estimated one day of time for each of the municipalities to populate the data on an annual basis.
16. Identify Resources Required at the County Level to Administer and Manage Any New County Waste Management Roles				
Description and Assumptions	This option looks at identifying the resources required at the County level to administer and manage any new County solid waste management roles and responsibilities. Should the municipalities transfer any new solid waste management roles to its upper tier, Bruce County, the County would need to understand what resources (such as staff roles and FTE, staff skill set, facilities, contracts, budget, permits, and strategies/plans/goals) they would need, in order to effectively carry out those new roles transferred from its lower tier municipalities. The identification of these resources can be achieved through the efforts of a new task group, or under the MIC, with representation from the municipalities, the County and BASWR, where applicable.			
High Level Evaluation	A) High potential for shared costs among County municipalities in the assessment of resources required for additional County administration/role of waste management services. B) Minimal to no capital costs.	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Identifying the resources the County would require would support the County in meeting regulatory compliance in the waste	A) High public resistance to option implementation. Potential resistance due to perception of loss of local jobs and or resources transferred to the County. May perceive new County roles as an upset to current operations and services.	Additional resources may be required for new programs, beyond what has been identified in Option 9 and 10. The additional resources are dependent on the requirements and may include, but are not limited to, staff time,

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	Increase in operational costs would be time for municipal waste staff, BASWR and Bruce County staff to form a task group. The task group could potentially be the MIC. The task group would assess the additional administrative resources required at the County level for the transfer of any waste management roles from the municipalities. No revenue potential for the identification of resources.	management roles transferred to them from the municipalities. B) No additional GHG emissions produced in identifying County's administrative resources. No impact on waste diversion.	B) Increased equality when compared to current situation. Potential for perceived public equality for fair and shared balance of services across all municipalities by transferring more roles administered by the County for all.	operational costs for contracts, and/or capital costs for equipment. This option should be completed in conjunction with other tasks. A task group (which could also be the MIC), would require staffing resources for meetings and review of associated materials.
Category 4: Promotion and Education Options				
17. Update Promotion and Education (P&E) Messaging to Current Issues				
Description and Assumptions	This option looks at County-wide P&E campaigns on problem issues based on what collectors see, audits reveal, and customer service complaints. Effective promotion and education is a key tool for increasing diversion and participation in waste management programs. The County's customers are diverse in terms of culture and age. These differences in demographics create different needs and methods to reach the County's customers. The P&E campaign will require staff to determine current issues, set diversions goals and develop the communications materials for the public.			
High Level Evaluation	A) High potential for shared resources and costs savings across partner municipalities for County-wide P&E approach. B) Minimal to no capital costs. Increased operating costs for staff time, updates on current issues, contamination, diversion goals,	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Focused P&E campaigns related to current issues can increase participation in diversion programs and therefore, increase overall diversion targets.	A) Low potential for public resistance to option implementation. Increased and focused P&E could remove barriers to public participation and therefore, be received positively by the public.	Requires staffing resources from each of the municipalities (up to 0.5 days of time per municipality per month) and the County (up to 0.25 FTE per month) It is anticipated that an external company will be retained to

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	sorting expectations and operational changes to communicate to public. County Waste Management staff for a County wide approach to P&E.	B) Reduces GHG emission to air. Potential for significant waste diversion from landfill. Increased effective participation can increase diversion thereby avoiding GHG emissions of materials otherwise being disposed. Aligns with municipal Climate Change strategies. Potential for significant waste diversion from landfill. High potential for municipalities supporting the County's waste diversion target of 50% set in 1995.	B) Increased equality when compared to current situation. Effectively communicates across the various demographics: rural versus urban, digital user vs traditional newspaper reader, youth vs elderly.	assist with the development of the communication materials at an estimated cost between $20,000 and $50,000, depending on their scope. This cost does not include any expenses associated with printing, mailing and/or advertising as this will be dependent on the delivery method.
18. Implement Best Practices on P&E Delivery				
Description and Assumptions	This option looks to implement best practices for P&E delivery. P&E initiatives including signs, guides, handouts, surveys, feedback, social media, digitized communications, staffed with trained volunteers and students, and information/ educational resources. It is assumed that 0.25 FTE staff would be required for a County wide delivery of P&E initiatives.			
High Level Evaluation	A) High potential for shared resources and costs savings across partner municipalities or one County wide P&E approach. B) Minimal to no capital costs Increased operating costs for staff time, educating the public, customer service, materials production, event content, community outreach, brochures, signage, calendars, online	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Best practices in P&E have been shown to achieve increased diversion which will go towards meeting provincial diversion goals. B) Reduces GHG emission to air. Potential for significant waste diversion from landfill. Best practices achieve more effective	A) Low potential for public resistance to option implementation. Positive public perception of one County-wide common message, as opposed to varying messaging across municipalities. B) Increased equality when compared to current situation. Positive public perception of diverse and inclusive approach to	Requires staffing resources from each of the municipalities (up to 0.5 day of time per municipality per month) and the County (up to 0.25 FTE per month). It is anticipated that an external company will be retained to conduct research on best delivery methods within the County and delivering content

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	website, waste Apps, social media, school and community outreach, curbside sticker program, advertising. Estimate 0.25 FTE County Waste Management staff for a County wide delivery of P&E.	communication, better diversion participation and thus reduce GHG impacts with more materials being diverted from landfill. Potential for significant waste diversion from landfill. High potential for municipalities supporting the County's waste diversion target of 50% set in 1995.	delivery of communications across varied demographic.	prepared in Option 17. It is estimated that the research will be between $10,000 to $20,000 and delivery costs would be determined based on the outcomes of Option 17 and how to best get the information to County-wide residents.
Category 5: Potential Role of BASWR				
19. Conduct a Business Review of BASWR				
Description and Assumptions	This option looks at conducting a business review of BASWR. The review would be conducted by a third party consultant, retained through a tendering process. The outcome would be a business review report with the lens of the upcoming EPR new provincial regulations impacting all Blue Box programs in the province. The review should be conducted in the near future, early 2021, in preparation of EPR decision making and planning. This option could be completed in conjunction with Options #24 and #25.			
High Level Evaluation	A) High potential for shared cost of review among BASWR's current municipal partners. B) Minimal to no capital costs. Increase in operating costs. Review costs could be performed by an external consultant, with background information provided by management and BASWR staff. Cost would be dependent on bids from RFP process or direct requests. No revenue potential from the review.	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Supports internal improvements in the verification of data reported by BASWR into regulatory agencies such as the annual MECP RPRA Datacall for provincial funding and diversion calculations. B) No additional GHG emissions produced due to the review. No impact on waste diversion due to the review.	A) Public will not likely be impacted by the option to conduct a review. Potential resistance from BASWR management and or staff. B) Increased equality when compared to current situation. Review result should identify whether BASWR is providing services to its partner communities on par to comparable jurisdictions, as well as if they are providing equal	The estimated costs for this to be completed by a consultant are $10,000 to $20,000. Requires staffing resources for input into the business review from each of the municipalities (up to 1 to 2 days of time per municipality) and the County (up to 3 days of time).

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
			services among its partner communities.	
20. BASWR Management Structure Review and Update				
Description and Assumptions	This option looks at a review and update to the current BASWR management structure. The review could be performed internally, through the formation of an independent review committee using MIC municipalities staff, or alternatively by an external consultant. Background information would be provided by BASWR management and staff. If a consultant is retained, they would develop a Terms of Reference for the BASWR Board with suggestions, such as technical representation.			
High Level Evaluation	A) High potential for shared cost of management structure review among BASWR's current municipal partners. B) Minimal to no capital costs. Increase in operating costs. Review could be performed internally by municipal staff, or alternatively by an external consultant. If a consultant is retained, estimated cost would be dependent on bids from RFP process or directs requests. No revenue potential due to completing the review.	A) No perceived changes or challenges to achieve regulatory compliance due to the review. B) No additional GHG emissions produced due to the review. No impact on waste diversion due to the review.	A) High public resistance to option implementation. Potential for the public to perceive the need to restructure the current management structure as an upset to current operations. B) Increased equality when compared to current situation. Update of structure provides balanced perspectives which would benefit all.	If completed internally it is estimated that this will require 5 to 7 days of time per municipality and up to 15 days of time by the County. If completed externally, the estimated costs are between $25,000 and $35,000. This would also require staffing resources for input into the business review from each of the municipalities (up to 1 day of time per municipality) and the County (up to 3 days of time).
21. Develop a Template for Municipalities to Report to BASWR				
Description and Assumptions	This option looks at developing an updated and standard reporting template for municipal waste management staff to all use in reporting their data to BASWR. BASWR is responsible for producing a consolidated report to RPRA's annual Datacall, on behalf of its municipal partners, that meets the requirements of RPRA. The data compiled by BASWR for their report directly impacts the amount of provincial funding received for			

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	their Blue Box program and RPRA's calculation and annual public reporting of all Ontario municipalities' diversion rates. This option can be implemented in conjunction with Options #15, #22 and #23.			
High Level Evaluation	A) High potential for costs shared among BASWR partners within BASWR annual budget. B) Minimal to no capital costs. Increase in operating costs. One time cost to develop an updated reporting electronic template and train BASWR and each municipal waste management staff. Operating costs would be for their training time. No revenue potential from the template development.	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Supports more effective and accurate reports with less risk for error or under reporting and alignment with future regulatory requirements. B) No additional GHG emissions produced due to the template development. No impact on waste diversion due to the template development.	A) No perceived changes or challenges to achieve regulatory compliance. As this option looks to improve internal reporting requirements, the public is not anticipated to have an opinion on this. B) Increased equality when compared to current situation. Supports maximization of funding available from provincial funding from all participating members.	Requires staffing resources of 3 to 5 days of time by the County to develop the template and up to a day per municipality to review the template and discuss with the County.
22. Use Weight Based Data Instead of Estimates				
Description and Assumptions	This option looks at using weight based data, adopted as a municipal standard, when monitoring and reporting waste management data. Current waste management reports identify a mixture and inconsistent use of reporting metrics such as weights (mixture of metric and imperial), volumes, unit counts, bin counts, bushels etc. In additional some of these metrics used are rough estimates. This option can be implemented in conjunction with Options #15, #21 and #23.			
High Level Evaluation	A) No potential to share option's costs. Costs sharing not applicable to this option, (See option #23 for scales). B) Minimal to no capital costs.	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Weight based data supports current and potential future metrics used for regulatory reporting.	A) Public will not likely be impacted by the option. As this is an internal approach to reporting, public perception is not anticipated.	Resource requirements are captured under Option 23.

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	Minimal to no change to current operating costs. No perceived additional costs for adopting an administrative standard in reporting weights, rather than volumes or units. (See option #23 for scales). No revenue potential from implementing this weight data.	B) Minimal to no additional GHG emissions produced. Potential for some waste diversion. Weight based data supports more accurate GHG and waste diversion estimations. (See option #23 for scales).	B) Increased equality when compared to current situation. Weight based data supports fair measurement and maximization of available funding for diversion and fees across all parties and jurisdictions.	
23. Explore Shared Weigh Scale Potential Partnerships				
Description and Assumptions	This option looks at exploring the sharing of weigh scales and potential partnerships such as neighbouring municipalities, and or the County. Bruce County Transportation and Environmental Services Department also utilize weigh scales for their vehicles, e.g. snow plow salt weights. There is potential for partnerships in adding additional scales at waste sites, or sharing existing scales throughout the County, such as salt, soil, gravel yards, to implement efficiencies. This option can be implemented in conjunction with Option #22.			
High Level Evaluation	A) High potential for costs shared among neighbouring municipalities and/or internally among municipal departments such as transportation; e.g. road salt snow, plow, scales. B) Medium to high capital costs. Cost of scales (quantity and specification to be determined) to be provided by vendors, or shared partial costs if existing scales are shared by departments (e.g., with Dept. of Transportation).	A) No perceived changes or challenges to achieve regulatory compliance. B) Increase of GHG emissions to atmosphere. Potential for increase in GHG emissions if collection vehicles have to drive longer distances to pass over a scale. No impact on waste diversion.	A) Low potential for public resistance to option implementation. Positive public perception of shared resources by departments. Additional detail would be required on anticipated increase in vehicle traffic as a result of sharing with other municipalities. B) Increased equality when compared to current situation. Fair and common weight based metric for all communities, enabled through a shared resource, i.e. scales.	Requires staffing resources to determine where additional scale(s) should be placed and to manage purchasing of scales. Estimated 3 to 5 days of time per municipality for planning. Alternatively, an external company could be retained to analyse and recommend options, including transportation routing analysis. The estimated cost would be between $25,000 and $50,000.

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	Potential for some revenue generation increase due to weight based scale measurement for all sites, materials and collection. Increase to cost for collection due to additional time required for truck to travel to a site with scales versus driving directly to the disposal site.			Estimated capital cost of $15,000 to $25,000 per scale, plus ongoing maintenance costs.
Category 6: Blue Box Program Provincial Transition to Full EPR				
24. Prepare Current State Financials In Preparation For Decision Making For Transition				
Description and Assumptions	This option looks at preparing current state financials in preparation for decision making for transition of the MECP provincial regulatory framework to EPR. The Blue Box program will transition to EPR, starting in 2023, and fully transition to EPR by 2025. Ontario Municipalities have recently communicated their preferred transition date to AMO. Following the release of the new Blue Box draft regulations, Municipalities and BASWR partners will each have to decide their path forward. Preparation of historical and current Blue Box financials will support their options analysis and decision making process. This option can be implemented in conjunction with Options #19 and #25.			
High Level Evaluation	A) Potential for municipalities to share cost to retain a third party to review performance and operational data and report in a consistent manner. B) Estimated operational costs would be for municipal waste management and BASWR staff time to gather necessary financial data and reports. Potential for additional audit costs if a third party is requested	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Would support compliance reporting as information and data would be better compiled and prepared and/or audited. B) No additional GHG emissions produced as this would be an internal financial review. No impact on waste diversion.	A) Low potential for public resistance to option implementation. No impact as this would be an internal financial review. B) None perceived as this would be an internal financial review.	Requires staffing resources of up to 2 to 3 days of time for each municipality and 5 days for BASWR to gather financial data and reports. Third-party financial auditing is estimated at $5,000 to $20,000 per municipality.

Option	Economic A) Cost Sharing Potential B) Overall Costs	Environmental A) Regulatory Compliance B) Climate Change and Waste Diversion	Social A) Public Acceptance B) Social Equality	Funding and Resources
	by management to support the preparation or assessment.			
25. Internally Assess EPR Scenarios and Expanded Blue Box Program				
Description and Assumptions	This option looks at carrying out an internal assessment of the various EPR scenarios and potential expansion of the materials that will be required in the new Blue Box program. Currently, BASWR does not collect as many types of Blue Box materials compared to other Ontario Blue Box programs. The assessment would produce a report with recommendations for BASWR partners. The assessment should begin as soon as possible. This option can be implemented in conjunction with Options #19 and #24.			
High Level Evaluation	A) High Potential for municipalities to share cost to retain a third party to prepare scenario assessment and models in a consistent manner. B) Minimal to no capital costs for the EPR assessment. Increase in operating costs. Estimated operating costs would be for municipal and BASWR staff time to gather necessary information for third party. Potential for modelling costs by the third party, if requested by management as an add-on to support the preparation of the assessment. No revenue potential for the assessment.	A) Improvements and efficiencies are made to current state of regulatory compliance, approval or reporting. Alignment with regulatory requirements can be integrated in the assessment. B) No additional GHG emissions produced as this would be an assessment. No impact on waste diversion due to the assessment.	A) High public resistance to option implementation. Potential reputational impact from shifting environmental responsibilities to private sector under EPR. Low potential for public resistance to option implementation. Positive perception in assessment of all scenarios of a new Blue Box service under EPR. B) Increased equality when compared to current situation. Perceived as an equalization of the Blue Box program across the province under a new EPR regulatory framework.	Requires staffing resources of up to 2 to 3 days of time for each municipality and 5 days for BASWR to gather financial data and reports. Alternatively, this could be completed by a third-party for approximately $10,000 to $20,000.

9.0 Recommendations

Based on Dillon's review, there is a desire by the lower tier municipalities to have the County take on more responsibility for the logistics of waste which include diversion programs and collection, contract management with service providers and the development and upkeep of subject matter expertise related to waste management

Based on the evaluation results, all of the options are recommended for the MIC to pursue; however, it is necessary for the MIC to confirm resources and costing needs for each of the recommendations. It is recommended that the MIC considers the following for each option:

- Costs and revenues of each option to compare with status quo,
- Appropriate funding to budget for development and implementation of each option;
- Identification of who will lead the option (County, municipality(ies)); and
- Recommended method of implementation (in-house, consultant, contractor).

The recommendations consider the overall financial, environmental and social impacts as well as the opportunity for service efficiencies. It also reflects further feedback that was provided by the MIC. However, there are several recommendations that are identified as more of a priority for the County as an option(s) is contingent of the completion of that option, or the option coincides with changes to a program due to changes by the Province, or the options is a key component to County's long-term waste management priorities.

All of the options and their recommended timeline for implementation have been identified below in Table 73 in the order that they were presented in the report. Items that are identified as priority have been highlighted. Figure 9 presents the options by year of recommended implementation.

Table 73: Recommendations and Timeline for Implementation

#	Option	Timeline for Implementation
1	Implement disposal site efficiencies	2025
2	Enhance municipal collaboration and partnership	2022
3	Increase opportunities for reuse and sharing participation	2024
4	Lead by example of 3R initiatives and policies	2024
5	Explore C&D waste diversion initiatives	2025
6	Explore LEED design incentives associated with C&D waste management for new development approvals and permits	2026
7	Update County Waste Management Strategy Master Plan	2022
8	Expand MHSW program	2025
9	Transfer diversion programs to County's responsibilities	2027
10	Transfer waste collection to County's responsibilities	2027
11	Implement County organics collection program	2024
12	Determine processing options for County organics	2023
13	Transfer all waste management roles to Bruce County	2027
14	Each municipality determines their long-term waste disposal needs	2022
15	Verify monitoring and reporting data	2022
16	Identify resources required at the County level to administer and manage any new County waste management roles	2025
17	Update P&E messaging to current issues	2023
18	Implement best practices on P&E delivery	2023
19	Conduct a business review of BASWR	2021
20	BASWR management structure review and update	2022
21	Develop a template for municipalities to report to BASWR	2022
22	Use weight based data instead of estimates	2023
23	Explore shared weigh scale potential partnerships	2023
24	Prepare current state financials in preparation for decision making for transition	2021
25	Internally assess EPR scenarios and expanded blue box program	2021

Figure 9: Recommendations and Timeline for Implementation

2021

- Conduct a business review of BASWR*
- Prepare current state financials in preparation for decision making for transition
- Internally assess EPR scenarios and expanded blue box program*

2022

- Enhance municipal collaboration and partnership*
- Update County Waste Management Strategy Master Plan*
- Each municipality determines their long-term waste disposal needs*
- Verify monitoring and reporting data
- BASWR management structure review and update*
- Develop a template for municipalities to report to BASWR

2023

- Determine processing options for County organics*
- Update P&E messaging to current issues
- Implement best practices on P&E delivery
- Explore shared weigh scale potential partnerships*
- Use weight based data instead of estimates

2024

- Increase opportunities for reuse and sharing participation*
- Lead by example of 3R initiatives and policies*
- Implement County organics collection program*

2025

- Implement disposal site efficiencies*
- Explore C&D waste diversion initiatives*
- Expand MHSW program*
- Identify resources required at the County level to administer and manage any new County waste management roles*

2026

- Explore LEED design incentives associated with C&D waste management for new development approvals and permits

2027

- Transfer diversion programs to County's responsibilities*
- Transfer waste collection to County's responsibilities*
- Transfer all waste management roles to Bruce County*

* Requires need for lower and upper tier Council approvals

10.0 Conclusions and Next Steps

The MIC's goal for this project was to collaborate with member municipalities to review waste management services to determine more efficient ways to deliver waste management services. This was completed by assessing current waste management systems and comparing them with best practices to generate ideas that reduce the amount of waste ending in landfills in the participating municipalities.

The study identified potential additions, modifications and or enhancements to the current waste management services approaches and operations. These options, if implemented, could enhance the effectiveness and operational and cost saving efficiencies in meeting residential solid waste management service needs and regulatory compliance in the near and long term future.

Completion of this service review has provided the MIC with extensive background information, triple bottom line evaluation of options and assessments including:

- A solid understanding of the participating municipalities current situation with respect to waste management for its residents;
- Comprehensive insights into effective strategies and best practices informed by research and waste management industry and policy;
- Recommendations that can enable the MIC to collaborate with member municipalities to identify opportunities for greater operational efficiency and provide recommended next steps to interested parties; and
- A roadmap for moving forward to achieve the MIC's waste management service efficiency goals.

The Province encourages cooperation among municipalities to seek efficiencies and to find mutually acceptable solutions to waste management. Many of the municipalities involved in this service review also indicated an interest and desire to partner and collaborate with each other. A partnership approach has the potential to expand waste management options available to the municipalities involved.

South Bruce Peninsula was not interested in participating in this study at the time that the study was completed; however, there may be an opportunity for the MIC to integrate and collaborate with South Bruce Peninsula in the future as they are also part of Bruce County. The MIC could provide South Bruce Peninsula with routine updates of waste initiatives and the progress of this study to determine if there are any options that would be mutually beneficial to collaborate on together.

10.1 Next Steps

This study has provided a comprehensive insight into developing potential options for consideration with the goal of achieving efficiencies in current and future waste services provided to residents. Pooling of resources and partnerships among MIC municipalities could be the basis of starting discussions among

interested parties leading to formal partnerships and terms of agreements. Following discussions with municipal staff and elected officials in Bruce County, the MIC should begin to implement priority options that have received municipal and County approval. Progress should be monitored and reported back by the MIC to municipalities and the County.

Appendix A

Jurisdictional Review Long List Selection

Jurisdictional Review

Long list of potential municipal selections considered for review

Note that the coloured text corresponds to the following legend:

- Blue text indicates similarity to Bruce County communities
- Red text indicates similar but alternative operations compared to Bruce County communities
- Green text indicates a new option for Bruce County communities

Municipality / County / Region	Population and Population Density (/km^2)	Rationale for Consideration
Bruce County and its municipalities (Ontario)	68,147 (2016 Census) 16.7 per km^2	• Two-tier municipal government structure with majority of waste management under lower tier responsibility • First Nations manage their own waste management system • Demographic is rural with a large agricultural sector • Community populations range from a couple hundred up to 11,500 (Kincardine) • High seasonal population for the cottage/beach districts • County responsibility for MHSW collection, events and reporting • County partnership for recycling collection and processing; BASWR • BASWR RPRA diversion rate: 27.7% • Multi-sorting at curbside by BASWR collector • Blue Box recycling accepts a limited type of materials • Some municipalities operate their own programs for additional Blue Box type materials (plastic film, polystyrene) and agricultural bale wrap • Municipalities partner with extended producer responsibility (EPR) organizations for diversion programs; electronic waste, tires • Municipalities partner with charity organizations; Diabetes Canada for clothing, textiles and household items • Some municipalities have a swap or share area for used items at their landfill • Landfill, disposal and depots are a municipal operation and responsibility • Municipalities manage 2-3 landfills and or transfer stations and produce annual monitoring reports • Weekly curbside garbage collection is a municipal responsibility; contracted services, some contracted with BASWR • Bag tag system, varying cost/tag/bag across County • No organics collection program for food waste • Leaf and yard waste (LYW) and brush is typically used for landfill cover • Compost products are not typically produced from LYW • Typically no bulky items collection system; residents drop off only • Local environmental volunteer organizations are active in some communities and initiate projects

Municipality / County / Region	Population and Population Density (/km²)	Rationale for Consideration
		• Promotion and education is a municipal responsibility typically communicated through newsletters, mail out inserts or social media
District of Muskoka (Ontario)	61,000 permanent and up to 82,000 seasonally	• Similar to the MIC municipalities; rural demographic • Large cottage seasonal increase of residents • GIS application to waste collection routes • Local government is governed by a two-tier system. • The District Municipality of Muskoka forms the upper-tier. Six Area Municipalities make up a lower-tier. • Both levels collaborate and align services to achieve cost-efficiencies
Grey County (Including Southgate, Chatsworth and Georgian Bluffs) (Ontario)	93,830 20.8 per km²	• Neighbouring County to the East, comparable demographics • Comparable population • Comparable population density • Curbside cart collection in some areas • Goods Exchange Day (Owen Sound)
Oxford County (Ontario)	121,000 people (8 municipalities: Woodstock, Tilsonburg, Ingersoll) 54.4 per km²	• Two-tier municipal government structure • Bag tag system • Sustainability plan and zero waste goal (initiated because of the Walker landfill Environmental Assessment) • Volunteer group Zero Waste Oxford discussing COVID-19, EPR, circular economy, etc. • CAO role includes working with the Zero Waste Oxford group
County of Peterborough (Ontario)	56,619 14.8 per km²	• Same RPRA Datacall Municipal Grouping #5 Rural Regional • Seasonal population • Diversion rate >50% • Organics program
Wellington County (Ontario)	90,932 34.2 per km²	• Comparable population • Diversion rate 39%; similar to Northern Bruce Peninsula rate (37%) • Rural areas • Collaboration with City of Guelph neighbour • Circular Economy (organics) Smart City initiative
City of Guelph (Ontario)	131,794 87.2 per km²	• Green Bin program • Very high separation of waste and raw materials • Comprehensive waste services full review benchmarking in 2018, by Dillon • MRF facility review completed • Partner with Wellington County on Circular Economy (Food) Smart City initiative • Very high diversion rates 53-63%

Municipality / County / Region	Population and Population Density (/km²)	Rationale for Consideration
Huron County (Ontario)	59,297 17.4 per km²	• Neighbouring County to the South, comparable demographics • Comparable population • Comparable population density • Curbside cart collection in some areas • Bluewater Recycling Association (BRA) MRF, similar accepted/limited Blue Box materials
Kawartha Lakes (Ontario)	75,423 and 31,000 seasonal	• Rural areas • Large seasonal population • Pop. comparable to Bruce County • Diversion rate is 38%
County of Northumberland (Ontario)	89,684 47.1 per km²	• Same RPRA Datacall Municipal Grouping #5 Rural Regional • Some seasonal population • Diversion rate >39% • Two stream Blue Box collection • Organics curbside carts
Norris Arm/Central Waste Management Region (NFLD)	75,000 pop. Central Region and 32,200 households, 100 communities	• Very rural, geographically wide area in Central Newfoundland • Closed all dumps and kept one large engineered landfill for the new Region, established in 2008 • Recycling markets challenges • Curbside collection, clear bags mandatory • Public drop off operational 6 days per week • Organics study completed in 2015
Sunshine Coast Regional District (BC)	31,977 of which half are rural	• BC was the first 100% EPR Blue Box provincial program • Organics program in place, drop off for rural, curbside for urban • Landfill is approaching end of life capacity
Township of Georgian Bluffs and Chatsworth (Grey County, Ontario))	10,500 and 6,600	• In 2013 these two Municipalities invested into an Anaerobic Biogrid Digester (organics processing) • $1.5 - 2 Million which included a sewage lagoon • Hydro One revenue for electricity e.g. $70,000 (10 months). • Over time, septic waste (not SSO) has become the main source that fuels the digester • Some discussion about “mothballing” the facility until future organics MECP regulations in Ontario are in place (2025?) • Saugeen Shores could explore potential partnership with Chatsworth/Georgian Bluffs. Is transporting of Sewage/Biosolids to a site like Georgian Bluffs Biogrid Digester an option if they are nearing capacity at their Southampton sewage plant as a short term solution? OCWA operates the Sewage Lagoon for Chatsworth and Georgian Bluffs. The Lagoon is located about 35 minutes from Saugeen Shores Southampton Sewage Plant.

Municipality / County / Region	Population and Population Density (/km²)	Rationale for Consideration
Township of Southgate (Grey County, Ontario)	7,190 11.4 per km²	• Fairly small municipality • Green Cart curbside program for the handling of organics • Green compost cart is collected every week • Blue recycle cart and grey garbage carts are collected on alternating weeks • Agricultural area • Eco Park (220 acres). The Park has 2 industries involved in the environment sector: Lystek which produces liquid fertilizer and Gro-Bark which produces soil from compost and wood chips.
Jasper (Alberta)	4,590 5 per km²	• High tourist attraction • Small town, rural • Organics program using community drop off bins for food waste (SSO) • Uses an animal-proof neighbourhood food-waste collection system that seems to work quite well
County of Norfolk (Ontario)	64,044	• Same RPRA Datacall Municipal Grouping #5 Rural Regional • Seasonal population • Diversion rate >50%
Kenora (Ontario)	15,000 permanent, 45,000 seasonal	• Pop 15,000 but reaches 45,000 in summer season • Considering new organics program • Sends Blue Box to MRF in Winnipeg 200 km away • Collects from seasonal cottages in summer (May-Sept) only
North Bay (Ontario)	51,553	• Same RPRA Datacall Municipal Grouping #5 Rural Regional • Seasonal population • Diversion rate >32% • Northern Ontario location; transportation/markets challenges
Regional District of East Kootenay (BC)	60,439 (16,000 rural) 2.2 per km²	• Very low pop. Density • All of the waste collected at the municipal and rural transfer stations around the Cranbrook, Kimberley and surrounding rural areas is hauled to the Central Subregion Landfill. • Yellow bin recycling program with over 600 yellow bins out across the East Kootenay for the collection of recyclables 5 transfer stations for the Region
Thompson-Nicola Regional District (BC)	132,663 2.9 per km²	• Very low pop. Density • 27 Eco Depots or Transfer Stations for the Region • BC has a 100% EPR Blue Box program
Greater Miramichi RSC (NB)	39,193 3.3 per km²	• Very low pop. Density • Rural regional service commission (Waste Management and Land Use Planning roles) • NB has 12 Regional Service Commissions (RSCs). Each region is responsible for providing MSW service within its boundaries • Province has obliged the municipalities within defined regions to collaborate/cooperate to provide waste management services • Has less aggressive/progressive management requirements as compared to NS Provincial waste strategy

Municipality / County / Region	Population and Population Density (/km²)	Rationale for Consideration
		• Implementing 100% EPR blue box program
East Hants (NS)	22,453 residents (9,000 homes and businesses)	• Rural regional district (1 of 7) • Provincial mandate to cooperate as regions, mid-late 90s • Linked to the implementation of NS's progressive waste management legislation • Second-generation (composite lined) landfills • Disposal bans • Province has obliged the municipalities within defined regions to collaborate/cooperate to provide waste management services
Durham Region (Ontario)	645,862 256 per km²	• Much larger, but lessons learned with cooperating with local tier • Only Ontario Region with an EFW incineration facility (Covanta)
York Region (Ontario)	1,100,000 624 per km²	• Much larger, but lessons learned with cooperating with local tiers • Progressive waste diversion performance • Regional Waste Management Strategy is very in-depth, includes scorecards and is updated every 5 years
Metro Vancouver (BC)	2,556,000	• Much larger; lessons learned with cooperating with local tiers. • Organics landfill ban

Appendix B

Jurisdictional Review Summary

Oxford County Jurisdictional Review Findings

Topic	Data Collected
Demographics	Pop: 121,000 (8 municipalities, major centres: Woodstock (32,300), Tilsonburg, Ingersoll) Density: 55 Hhlds: 43,700 SF & 3,300 MF Seasonal: n/a Agricultural region (2,000 farms) in SW Ontario
Governance Structure	Two-tier municipal government structure; upper tier Oxford County and 8 lower tier municipalities. The County has waste management responsibilities. In 2000, municipalities decided to give waste management authority to the County.
Performance	Diversion rate 2018: 50.0% Rural Regional RPRA grouping (#4)
	Garbage disposed: 193 Diverted (all): 194 Generated: 387
Facilities	Landfill open hours Monday to Friday from 8:30 a.m. to 4:30 p.m. and Saturday 8 a.m. to 4 p.m. Open compost windrow at landfill. Oxford County Waste Management Facility in Salford, ON. Woodstock has a new environmental transfer station at James Street (Brush, LYW, Bulk items); opened June 2018.
	Woodstock has Clarke Street South depot. Residents may drop off acceptable recycling materials sorted in the appropriate large bins, Mon. to Fri. Blue Box materials go to the privately owned Canada Fibres MRF.
Collection	County: Curbside weekly collection, Monday to Friday. Collect garbage and recycling from 26,000 households across Oxford County six participating municipalities co-collected in the same truck. Bulky curbside 1 week/year (Spring) and more often in Tillsonburg. Year round acceptance at TS. Woodstock: 2 stream Blue Box collection, Bulky waste 2x per year curbside. Woodstock remains separate from the county, using its own system under a contract with the county that expires in 2028. South-West Oxford will also continue with its six-day system while pushing towards a seven day cycle.
Contracted Services	New co-collection contract started May 2020. Contract is shared by 6 municipalities. Collection vehicle has a divider down the middle to keep material streams separated. The county's new service provider, Emterra Environmental, was awarded the contract for five years, with two one-year options. Curbside garbage and recycling pickup will cost the county about $2.8 million a year, plus an additional $703,091 for the processing and transfer of the materials. Woodstock remains separate from the county, using its own system under a contract with the county that expires in 2028. South-West Oxford will also continue with its six-day system while pushing towards a change to a seven day cycle. The previous contract was set to expire in September 2022 but "contractual performance issues" led to the mutual termination.
Programs	Woodstock Environmental Advisory Committee Co-Sponsors ReuseapaloozAHA: a free swap event on a Saturday at the Woodstock Agricultural Fairgrounds and other community locations. Accepts families of volunteers. Published a "do it yourself" manual/pamphlet on how to run swap events available at the Farmers Market. Has its own website http://www.reuseapaloozaha.ca/

Topic	Data Collected
	Accepts all Blue Box materials including bulky polystyrene foam (EPS), except for foam trays and crystal polystyrene (#6). Black plastics are accepted. No plastic film accepted however they have a drop-off pilot. Blue Box lids, for windy days, available for purchase ($1.50) in several locations
	Composting educational webpage; for indoor and outdoor composting. Sell compost and Green Cones. Sell quality compost to companies. Residual compost of low quality is used as landfill cover. 11 free brush, leaf and yard waste depots located throughout the County. Woodstock has curbside seasonal LYW and Xmas tree collection and accepts pumpkins at their depots as a cost to them.
EPR /Stewardship	Accepted at the landfill site and Woodstock's environmental depot only. Tires: passenger and light truck, on or off the rim. Electronics MHSW Batteries
P&E	County website: oxfordcounty.ca/services-for-you/waste-management Website for swap event www.reuseapaloozaha.ca Wasteline mobile app Searchable online sorting tool Subscription email for updates to website changes or notices Social Media: Facebook, Twitter, YouTube Online feedback platform: speakup.oxfordcounty.ca Calendars (available online) for the County and one for Woodstock Oxford County Waste Management & Education Centre (opened June 2018). The Education Centre component of the building offers a variety of interactive displays that educate on environmental sustainability, renewable energy and zero waste. The centre will be primarily used for school visits, but interested members of the public can request a tour. Each municipality assumes responsibility for customer service related to waste management and forward to the County for resolution. P&E carried out as a staff group effort, including website communications staff and 3 staff in office.
Partnerships	Sharps collection - partner with Southwestern Public Health. Provide free containers and promote on website. Volunteer group/families at swap events. CAO and Director, and Manager of Public Works role includes working with the Zero Waste Oxford Committee and liaisons.
Efficiencies, Cost Savings and Innovative Approaches	At the cutting edge with ideas/opportunities Online purchase of bag tags The Oxford County Waste Management & Education Centre officially opened in June 2018. The net-zero energy facility includes a solar photovoltaic system that produces enough electricity to offset the amount of electricity used by the entire Waste Management Facility. Achieving zero waste is a goal of the Future Oxford Community Sustainability Plan, which includes a waste reduction and diversion strategy to ensure the County's landfill disposal needs are met until the year 2100. The current expected lifespan of the County's landfill is 2063. The building features numerous energy efficiencies, including rammed earth walls that are 22 inches thick and contain 8 inches of insulation, triple-pane windows and Energy Recovery Ventilators that heat the incoming air supply with heat energy recovered from the building's exhaust air.

Topic	Data Collected
	Enhanced Material Recovery & Biological Treatment has emerged as the preferred technology that aims to recover as much as 90% of the materials that end up in our landfill. Using this unique but proven technology, garbage would be sorted with organics separated for processing in a manner which could produce biogas, biosolids and compost materials. Other recyclable and recoverable materials like metals, plastics, and construction and demolition materials would be separated and sold/distributed to various end markets. The goal would be to have as little as 10% of the material left to be disposed of in the landfill. Restructured staff to be more efficient. Have an admin team of 4. Reduced office staff and redistributed staff due to department retirees.
Budget	2020 net budget WM total $1.92 Million. 2018 gross expense WM $236/hhld 2015 average operating cost $89/tonne for collection, disposal and diversion services, Oxford County. Includes revenues.
Staff	Public Works is responsible for the Oxford County Waste Management Facility.
Strategy/Plans	2017, a series of waste audits were conducted Community Sustainability Plan and its zero waste goal (initiated because of the Walker landfill Environmental Assessment) 2014 Waste Management Strategy "Let's Talk...Trash" (305 pages) by Genivar. Started in 2011. Included public consultation by council request. 2011 Woodstock Waste Diversion Plan. March 2017- As an initiative of Oxford County's Zero Waste Plan, Oxford County contracted a consultant to conduct a Waste Management Facility waste composition study to report on the current waste disposal situation occurring in the residential sector of Oxford County.
Policy	Construction and demolition waste must be recycled under Oxford County By-Law No. 4954-2008. The compactor takes photos and follows up with customer with a first warning. Next time, there is an increase in tip fees per bylaws. Tip fees increases go up 2x, then 3x.
	Any vehicle that does not abide by the Highway Traffic Act or Oxford County By-law 4954-2800 will be subject to increased fees. 1st offence: 2X disposal fee 2nd offence: 3X disposal fee 3rd offence: 5X disposal fee
	Full user pay ($2 tags for every bag); no garbage bag limits. Can purchase online and delivered by mail. Bag weight limit is 20kgs; larger than this requires 2 bag tags.
Future Regulations /Policy	Zero Waste Oxford group discusses EPR issues. Transition year aligns with their contract end date. Decided to hand over blue box to the producers. Woodstock has some equipment asset and 6 municipalities share one building.
	Promote composting and sell composters and green cone food digesters and provide website information/resources. Enhanced Material Recovery & Biological Treatment has emerged as the preferred technology that aims to recover as much as 90% of the materials that end up in our landfill. Only Woodstock, due to its urban population size, would have to comply with new organics regulations. Oxford County is mostly 50% farming communities.
	Accept mattresses and textiles at the depots.

Topic	Data Collected
	Zero waste goal. On September 9, 2015, Oxford County Council passed a motion to establish Oxford as a "zero waste" community. Zero Waste Oxford Committee discusses COVID-19, EPR, circular economy, alternative technologies (MBT) etc. Webpage for construction and demolition waste oxfordcounty.ca/services-for-you/Waste-Management/Construction-and-Demolition-Recycling Promotes: REgift: Give your furniture and other large items that are in good conditional to a relative or friend who can put them to good use. REuse: Donate items to an organization that accepts used goods. REdistribute: Post items on buy and sell websites.
Practices contributing to Diversion	Of their 50% diversion rate, half is due to residential recyclables diversion and 39% of the 50% is due to organics diversion from landfill. LYW and C&D are big contributors. Residents have a high diversion/recycling mindset. Switch to weekly recycling collection increased diversion by 11%; saw a large improvement. County always offered HHW and tires collection long before it was mandated. A lot of P&E contributes to success. Added more communications in 2014. This was very big help and support.
Data Sources / References	RPRA 2018 Datacall rpra.ca/programs/about-the-datacall. County website www.oxfordcounty.ca/services-for-you/waste-management. http://futureoxford.ca/general/sustainabilityplan/index.htm http://www.oxfordcounty.ca/Your-Government/Speak-up-Oxford/Campaign-Details/ArticleId/13603/The-future-of-waste-management https://www.oxfordcounty.ca/general/AnnualReport/2018/default.aspx Zero Waste Oxford Committee http://www.futureoxford.ca/committees.aspx#35006 2020 Budget Performance Measurements 2015
Contacts/staff	David Simpson, Director Public Works Mike Amy - tech services Pam Antonio - supervisor of waste management services at Oxford County 519-539-9800 ext. 3114 pantonio@oxfordcounty.ca

Grey County Jurisdictional Review Findings

Topic	Data Collected
Demographics	Pop: 93,830 Households: approximately 48,000, Density: 21 Total Private Dwellings: 47,560 Total Private Dwellings Occupied by Usual Residents: 39,563 (83%) Largest municipality is City of Owen Sound (22,000), Southgate (pop. 7,300 and 3,500 hhlds) Blue Mountains has 50% vacation dwellings. Others range from 10% (Southgate) to 25% (Grey Highlands) vacation dwellings.
Governance Structure	The County seat is in Owen Sound. County does not operate a County run waste management structure. Lower tiers operate their own waste, recycling and organics programs. The County does however provide an online portal to each municipal waste and recycling websites. Municipalities include: City of Owen Sound, Meaford, Georgian Bluffs, Southgate, Chatsworth, Blue Mountains, Grey Highlands, West Grey, Hanover. In mid 1990s during Ontario amalgamation, a study was done to look at waste management options under amalgamation. Landfill space was plentiful and there was no political will to transfer waste to the County. Recently there has been interest in potential collaboration and partnerships for MHSW and organics programs.
Performance	Southgate calculates its own diversion rate: 47% in 2018 RPRA Diversion rates 2018: Blue Mountains 47%, West Grey 43%, Georgian Bluffs 37%, Grey Highlands 37%, Owen Sound 32%, N/A: Meaford, Hanover and Chatsworth. Groupings: Rural Collection North (#5) and Rural Collection South (#7). Grouping average RPRA 2018 diversion rates were 25% for #5 and 34% for #7. Meaford has been recognized as having one of the highest waste diversion rates in the province >57% in 2015.
	Average of 2018 Datacall results (Blue Mountains, West Grey, Georgian Bluffs, Grey Highlands, Owen Sound). Note Blue Mountains have higher numbers due to large seasonal pop. Garbage disposed: 216 Diverted (all): 142 Generated: 358
Facilities	Southgate - has one Transfer Station site with roll off bins for collection and one active landfill. One of the TS is located at the landfill. In 2016 a used compactor was purchased ($290,000) for their remaining active landfill to expand its lifespan. C&D loads go over the scales or small quantities, such as bags, are fee based. Owen Sound closed their landfill in 2001. Miller Waste Transfer Station is a privately owned facility and the tipping fees are set by Miller Waste. Waste is exported to the private landfill at Twin Creeks near Lampton. Miller has a contract agreement with the landfill owner Waste Management Inc. Owen Sound has a LYW composting facility, open 7 days per week, 830am-8pm Meaford- transfer station was permanently closed in September 2015. Offered monthly bulky waste pick up from April to Sept.
	Owen Sound - Miller Waste owns and operates the City's Recycling Depot (2006), located at the transfer station. Southgate - blue box recycling goes to the Mount Forest MRF owned by WM Inc. Formerly the township had a shed as a BB transfer site. Currently, collection trucks generally direct haul to the MRF.
Collection	Southgate - utilizes cart collection of recyclable, waste and compost materials by providing carts for residents and businesses that are tipped on a weekly basis. The green compost cart is collected every week, and the blue recycle cart and grey garbage carts are collected on

Topic	Data Collected
	alternating weeks. Automated cart collection in 2003. Operates the entire curbside collection with 2 vehicles that operate a combined total of 6 days per week. Owen Sound - uses Miller Waste's transfer station. Meaford - Miller's has onboard cameras and GPS units to track collection activities to verify customer inquiries.
Contracted Services	Owen Sound - Miller Waste operates the City of Owen Sound Recycling Depot on behalf of the City. Meaford - uses contracted services for waste management operations Southgate - contracts the transfer of materials from their transfer stations for electronics, MHSW, oil, drywall, tires and used oil.
Programs	Owen Sound: The Goods Exchange Day (three times per year, 10% participation) program provides an opportunity to City residents to leave items that are no longer useful to them but may still be useful to others. Participants place items at the end of the driveway and tie a white plastic bag to one or more of the items to indicate these are goods exchange day items. Southgate - has a reuse facility space at their transfer station for free swap or reuse. Does not have to go over the scales. Closed during Covid.
	Owen Sound residents can recycle (curbside bi-weekly collection dual stream, biweekly garbage) with either a standard blue box or transparent plastic bags. Starting 2021, corrugated cardboard will be collected on regular recycling day. Currently it must be bundled separately beside the blue box and not inside it. Drop off depot Southgate has their own blue cart automated 60/40split body trucks (two) collection system since 2003. Trucks have mounted cameras to record operations. Blue box and garbage is collected biweekly and organics is weekly.
	Three municipalities that have organics program are very small communities. Southgate: Green compost cart weekly collection; using plastic compostable bags or any plastics is not permitted. The green carts are 240L capacity, and residents may fill them with both kitchen food waste and yard waste. The extra capacity allows residents to use their green carts for garden trimmings and Southgate gets valuable carbon rich yard waste for their composting facility. LYW tonnes are measured by roll off collection container that goes over the scale before transfer to the compost process. Adjusting By-law so that private contractors cannot fill up LYW bins for free. Compost product is free to residents for their gardens. Meaford (pop. 11k) has an organics green bin program. They also have a LYW depot open Fri and Sat. Mulch, Woodchips and Compost are available for pick-up while quantities last. Owen Sound does not have a curbside organics program. To divert organic material from household garbage, kitchen containers ($6.78) and backyard composters ($22.60) can be purchased at two locations year round. Owen Sound: does not collect leaf & yard waste at the curb (even if it has a bag tag). It must be brought to the LYW composting facility. Owen Sound has a LYW composting facility, open 7 days per week, 830am-8pm
EPR /Stewardship	Electronics: Southgate- dispose at both Transfer Stations Free of charge. Owen Sound- Habitat for Humanity ReStore is the certified collection point for the Ontario Electronic Stewardship Waste Electrical and Electronic Equipment. MHSW: Southgate- The Orange Drop bin alternates between the Dundalk Transfer Station and the Egremont Transfer Station monthly. The Orange Drop will be at the Dundalk Transfer Station for February, March, April, August, September and October. The Orange Drop will be at the Egremont Transfer Station for January, May, June, July, November and December. Tires: Owen Sound - accepted at Miller Waste TS. MHSW: Household Hazardous Waste-This service is open to residents of: Owen Sound, Chatsworth, Meaford, Georgian Bluffs. West Grey and Grey Highlands.

Topic	Data Collected
	All residents attending the Household Hazardous Waste facility must bring valid ID indicating their home address from the townships listed above. All residents visiting the Household Hazardous Waste facility are required to fill out the MHSW form. Waste is accepted 5 times per year.
P&E	County provides links to info on their site for each of the 9 municipalities. Southgate- has invested in the Recycle Coach App to help residents with information and schedules for the Township's waste and recycling program. Are able to view pickup schedule and set personalized reminders that go straight to a smartphone. SORT SOUTHGATE sorting search website for recycling. Public Liaison Committee (PLC) and how to become a member, on their Boards and Committees page. Reach out at schools events. Mail out of calendars end of year and pamphlets. Owen Sound - comprehensive information for residents on their waste management website; can subscribe for updates; has a feedback email Feedback@owensound.ca. Covid cancelled most public events. Typically attend cottage trade shows. Meaford- In 2017, a new Waste Management web interface and smartphone app, municipal employees in the waste management division educate the public through municipal events, visiting schools, different local committees and groups. Contract Customer Service Clerk position under the Planning and Building Service Delivery Review assists in the delivery of Waste Management customer service.
Partnerships	Partnership initiatives Southgate has received clothing bins from the Diabetes Association for each of our Transfer Station locations. There is also a clothing donation bin located at the Dundalk Arena - 550 Main Street East, Dundalk. Owen Sound- Habitat for Humanity ReStore is the certified collection point for the Ontario Electronic Stewardship Waste Electrical and Electronic Equipment. Meaford - Municipality continues its partnerships with local municipalities and other organizations to be able to offer drop off facilities to take items not accepted in curbside collection. Consideration in a report to council for shared services for Waste Management through the amalgamation of some lower tier municipalities within Grey County, Grey County assuming these services or if there was only a single tier government.
Efficiencies, Cost Savings and Innovative Approaches	Owen Sound -implemented a waste bylaw applicable to the IC&I sector, restricting recyclables going to landfill, not normally seen in other jurisdictions. In 2006 they developed an IC&I model to determine the estimated waste streams for that sector and impacts to their City waste management. Study done in1990's regarding amalgamation and waste management. At the time, no political will. Since then, they have moved forward with a MRF and contracts with Miller Waste in 2005-2006. Southgate - Started to see rising costs of the MRF. Carried out waste audit of collected material to identify issues. Saw contamination in blue box material collected. Started a pre-sort at their transfer station. Removed large bulky items, such as lawn chairs and gas cans. Increased quality of MRF material. Sent out P&E to residents to inform them that contamination would increase their taxes to pay for the MRF's rising costs. Saw an improvement. Meaford - spent $1 Million on landfill expansion studies. Much of the diversion relates to adding curbside collection of organic material throughout the rural areas of the municipality and additional measures to increase recycling. Includes three-option garbage and recycling bins, plastic and paper collection bins at public parks and beaches, new coffee cup recycling bins at arenas and other municipal facilities and collection from multi-residential buildings. Moving curbside waste collection to biweekly while increasing recycling and organic material collection to weekly increased the 2011 recycling numbers by 17%.

Topic	Data Collected
Budget	Owen Sound - 2020 waste management operating budget is $548,000 and their capital budget is $121, 000. Population served is 21,341. They do not have a landfill. Southgate - operating budget is $800,000, capital fluctuation $100,000. In 2016 purchased a compactor $290,000. Meaford (with a very high diversion rate (>55%) waste management budget (2017) was approx. $1 M gross, $ 330,000 revenue, $43k transfers and $717,000 net. Population is 11,000. Net WM budget is $65/capita. Bag Tag Fees- to obtain full cost recovery for garbage services, the bag tags would need to increase to $4.50. As a result, Council approved an increase to $3.00 per tag.
Staff	The County does not have waste management staff; each municipality or township has their own staff for all waste operations. Owen Sound - waste management has no FT staff. 2/3 of one shared staff person is for WM. Engineering combined staffing is approximate 1.5 FT. Southgate -Director, Admin assist 1day/week, 3 drivers FT, 4 attendants PT, fleet manager foreman. Meaford: Dir Environmental Services, Chief Operations Environmental Services, Foreperson Environmental, Op Waste/Water (3), Environmental Services Co-ordinator, Summer Student. Parks staff take care of waste bins at all special events. Customer Service Clerk for Development and Environmental Services assists with customer service enquiries.
Strategy/Plans	Owen Sound- Long Term Waste Management Plan (2007 -2031) (200 page report). No new plan in works. Southgate - Have a 2014 version. Awaiting new blue box regulations terms before developing next strategy or plan. Township of Georgian Bluffs commissioned the development of a Long Term Waste Management Plan from Gamsby and Mannerow Limited.
Policy	Owen Sound - The Mandatory Recycling By-Law (2006) has information for industrial, commercial and institutional facilities. Southgate - Waste By-law provides direction for the collection and sorting of recycling, organics, waste, non-pickup diversion materials, transfer station bulky drop off items, Municipal Household Hazardous and Special Waste materials (MHSW), banned materials, littering controls, waste burning, offences and penalties for disposal of diversion materials and refusal for the Township of Southgate.
	Owen Sound - non compliant curbside collection is left behind on the curb by the collector. Southgate - Bylaw has clauses regarding collection. Will also involve the police for enforcement. Meaford -By-law enforcement services review potential charges for illegal dumping.
	Owen Sound: 4 bags of garbage (the bi-weekly allowable limit for curbside collection) and a mandatory bag tag policy. Southgate - respond to complaints. Carry out a curbside blitz and check carts contents, especially multi-residential carts. Chatsworth: Residential may set out as many bags as they desire, however only one bag may be untagged. All additional bags must be tagged. Commercial and industrial users will be entitled to three untagged bags bi-weekly. All additional bags must be tagged. Garbage boxes or bins must have a visible marker to indicate “full” or “empty”.
Future Regulations /Policy	Owen Sound - align transition with contracts end on June 1, 2023. Southgate - council decided they would like to keep providing their blue box collection services, but negotiate with producers for 2023. Meaford: It is not anticipated will see any significant savings in recycling until the end of

Topic	Data Collected
	current contract or if they can negotiate a change order or early exit from current contract. Note, residents still want to have their concerns/calls/complaints considered by a municipal staff member rather than a third party contractor.
	Owen Sound - no organics green bin program currently, but new interest and discussions for collaborations started in 2019 with Georgian Bluffs bio-digester called BioGrid. Southgate and Meaford have green bin SSO collection programs. Southgate landfill was getting full. Thought had 15 years remaining. Looked into options including, expansion and gasification options. An organics diversion program was selected. In 2013 Georgian Bluffs and Chatsworth invested into an Anaerobic BioGrid Digester (organics processing). $1.5 - 2 Million which included a sewage lagoon. Hydro One revenue for electricity e.g. $70,000 (10 months). Over time, septic waste (not SSO) has become the main source that fuels the digester. Some discussion about suspending the facility until future organics MECP regulations in Ontario are in place. Currently the BioGrid (Bio Green Renewable Industrial Digester) is used on an as needed basis and primarily digests sewage waste.
	Owen Sound - Miller Waste contactor controls waste collection. Southgate- received clothing bins from the Diabetes Association for each Transfer Station. There is also a clothing donation bin located at the Dundalk Arena. Shingles go to London if clean enough such as shingles from a stripped roof. Carpet accepted at both locations in an old truck body. Must be cut in 4 feet strips. Drywall is accepted. Mattresses; had fee increased.
	Owen Sound - Reuse is practiced through the residential driveway swap of goods program days in neighbourhoods. Last year there was a lot of discussion around SUPs (single use plastics). Federal Government announced they would offer SUPs grants. Local environmental groups like to see the City push the SUPs agenda.
Practices contributing to Diversion	Owen Sound has a Mandatory Recycling By-Law that also has information for industrial, commercial and institutional facilities (ICI) sector. Goods exchange days (swap/reuse). HHW program has good community uptake, it is very well attended. Southgate: has a zero waste goal by 2050. Is a rural municipality with an automated cart collection system, bi-weekly garbage and recycling pickup, a robust compost program, two transfer stations, a diversion rate over 50% and 74 years left of landfill space and a tax base of less than 3,000 households. They do this by making capital investments that save in operating costs and pushing back on residents to do their part. Southgate savings: 37% increase of landfill lifespan due to program changes over last 7 years. For “missed” collections, they installed cameras on each truck to record the day’s events. For less than $900 per truck, the cameras have greatly reduced the times the driver has gone back to an address, and the number of collection inquiries, to about once per week. For new builds, or when people move in to discover the carts have disappeared, a new cart bundle now costs residents $250 (one grey, green and blue cart, and one kitchen container), offsetting some of the costs of maintaining an automated system and encouraging residents to take ownership of their participation. Amended waste site ECA to accept neighbour's waste as an increased revenue stream. Use a Sea can as a mobile public drop off.
Data Sources / References	www.grey.ca www.grey.ca/garbage-recycling www.publichealthgreybruce.on.ca/Portals/1/Documents/WhoWeAre/CensusReleaseII.pdf www.southgate.ca/en/municipal-services/waste Southgate: 2018 Annual Waste Report https://thecif.ca/southgate-does-more-with-less/ www.georgianbluffs.ca/en/live-play/garbage-recycling-and-waste www.georgianbluffs.ca/en/live-play/hazardous-waste

Topic	Data Collected
	RPRA 2018 Datacall rpra.ca/programs/about-the-datacall Owen Sound Long Term Waste Management Plan 2007, by Lura Consulting www.meaford.ca/en/living-here/garbage-and-recycling Meaford, Waste Management Services, Report No. SDR-45, Oct.2, 2017 to Council https://www.georgianbluffs.ca/en/live-play/garbage-recycling-and-waste.aspx
Contacts/staff	Jim Ellis, Public Works Manager, Township of Southgate, 185667 Grey County Road 9 Dundalk, Phone 519-923-2110 ext. 250 or224| Toll-Free 1-888-560-6607, jellis@southgate.ca Dennis Kefalas, Director of Public Works and Engineering, Owen Sound 519-376-4440 ext.1201, dkefalas@owensound.ca. Supervisor of Environmental Services The Corporation of the City of Owen Sound 808 2nd Ave East Owen Sound, Ontario N4K 2H4 519-376-4274 ext.3223 Meaford Rob Armstrong- Director of Development and Environmental Services,

City of Guelph Jurisdictional Review Findings

Topic	Data Collected
Demographics	Population: 131,000 Hhlds: 30,403 SF, 26,409 MF (high MF #, typically consider townhouses MF) Population density: 1,511.1 persons/km^2
Governance Structure	Single-tier City is responsible for all Waste Management Programs
Performance	57.7%
	Garbage Disposed: 183 Diverted (all): 250 Generated: 433
Facilities	The City does not own/operate a landfill, outgoing material from the transfer station is sent to the Waste Management Twin Creek Landfill in Lambton County. The City entered into an agreement with Waste Management in September 2013 to transport waste from the transfer station and dispose of residual waste at their Twin Creeks landfill. The contract term is for 10 years with options to extend. The City's former Eastview Landfill closed in October 2003 with a total of approximately 3.5 million cubic metres (4,329,000 tonnes) of in-place waste. Waste Resource Innovation Centre: Public waste drop-off (PDO) area (fees based on type of material); Recycling and yard waste drop-off area (free of charge); MHSW depot; Waste diversion education centre (advance booking is required)
	In 2015, a PDO facility was added to the WRIC and it is accessed through Gate 1 at the WRIC. The City allows mixed waste, appliances, C&D waste, wood waste, LYW (commercial) to be dropped off at the PDO. The City owns and operates a single-stream MRF located at the WRIC The OWPF is located at the City's WRIC and operates 352 days a year. The City owns the OWPF and it is operated by a private contractor
Collection	Bi-weekly garbage and recycling collection Weekly organics collection Automated collection using carts Arranged collections for bulky items Residents can top off Green Cart with LYW (grass is not accepted, City promotes grasscycling) Two collections for bagged yard waste curbside collection – spring and fall (2020 saw curbside LYW collection offered until July 1. City is exploring moving to seasonal curbside program) Free drop off of YW at the PDO.
Contracted Services	The City owns the OWPF and it is operated by a private contractor Curbside collected by the City The City owns and operates the MRF
Programs	The ReCycle Bike Reuse Program encourages Guelph residents to drop off unwanted, usable bikes at the WRIC. The program aims to divert bikes of all different shapes, sizes, colours and conditions from landfilling. The City promotes two Goods Exchanges Weekends a year – one in the spring and one in the fall (noted Spring 2020 cancelled) The City has a seasonal Paint + Reuse Program which allows residents to pick up used paint and other products free of charge at the MHSW Depot

Topic	Data Collected
	Single stream program Residents may choose from three sizes of carts (i.e., medium, large, extra-large), with service designated at the extra-large size level Additional blue carts are available at a cost to the customer Materials such as paper, glass, metals, and plastics are accepted in the blue cart program Does NOT accept polystyrene & film plastic
	Green Cart Collection LYW collection (spring and fall)
EPR /Stewardship	The City does not collect tires, residents can dropped off tires at locations registered with RPRA Electronics and MHSW can be dropped off for free at the Waste Resource and Innovation Centre Batteries used to be collected by a curbside program but removed now due to EPR program
P&E	Solid Waste Resources provides regular communications to residents that promote the 3Rs (Reduce, Reuse and Recycle) and educate on how to properly manage the different waste streams. Some of the examples of how public outreach is conducted includes: The annual online curbside waste collection calendar (hard copies available as well) which includes the collection schedule, waste program information and waste tips. Online users can enter in Users ; Brochures which provide information about existing diversion programs; Display boards used at special events and exhibits; “Oops stickers” and door knockers used by waste collection staff and by-law officers at the curb to indicate and help residents correct improper sorting and waste set out; and The City’s garbage and recycling web pages provide various resources including the Waste Wizard (discussed further below), information on waste reduction programs (e.g., bike reuse program, food waste reduction), a video on how to properly set out and sort waste for collection, responses to frequently asked questions, information on the WRIC facilities and reports and resources for residents (e.g., the SWMMP, waste management bylaw).
Partnerships	With Guelph aiming to become Canada’s first Circular Food Economy, the City and Wellington County have started partnerships and collaborations with local food growers and businesses that cover all aspects of the food system from farm, processing and distribution, to retail, restaurant, technology, education, hospitality and infrastructure. An option recommended in the 2014 Solid Waste Management Master Plan was to explore innovative waste diversion partnerships with the private sector or other municipalities as opportunities arise. However, this option did not proceed as no opportunities were presented
Efficiencies, Cost Savings and Innovative Approaches	The City currently holds a variety of programs in order to encourage waste diversion. These programs for specific waste streams include curbside collection of organics and recyclables, ReCycle Bike Reuse Program, the goods exchange weekends and the Paint + Reuse Program which provide residents with opportunities to divert additional materials from landfill disposal. The City also operates the PDO at the WRIC, which includes the Recycling Zone where residents can drop off items such as blue cart recyclables, electronic waste, shredded paper, MHSW, YW and gently used textiles for reuse or recycling at no additional cost.
Budget	2020 Budget: $ 2,213,000 Budget 2020 - 2029: $56,389,700
Staff	The City operates the MRF, TS, PDO and MHSW and City employees provide curbside collection OWPF operation is contracted out, there is one City employee responsible for the operations contract

Topic	Data Collected
Strategy/Plans	Currently drafting Solid Waste Management Master Plan Council approved a Solid Waste Resources Business Service Review in 2018
Policy	By-law No. 2019 - 20392, A By-law to provide for the management of waste within the City of Guelph
	The City currently enforces waste management under By-law number (2019)-20392. The City is authorized to administer and enforce this By-law, which provides guidelines for areas such as collections, container requirements and placement during collection days, limits and littering. The City has used "oops stickers" for improperly sorted containers. Items might be left at the curb for enforcement under Waste Collection Bylaw which is either a fine or clean-up fee
	Waste limits are prescribed under by-law number (2019)-20392. Based on the cart system (i.e. one 240L garbage cart every other week, one 360L recycling cart every other week, one 80L organics cart weekly, etc.)
Future Regulations /Policy	In-house collection Own and operate their MRF New Solid Waste Management Master Plan (SWMMP) in development, by Dillon Consulting is looking at options for transition.
	Green Cart Collection - program recently expanded to include multi-residential households. Own and contract operations for SSO processing (Organics Waste Processing Facility)
	Large items such as appliances (doors and lids removed for safety reasons), metal goods (e.g. lawnmower, wheelbarrow, BBQ), furniture, and mattresses can be collected at the curb through the Large Item Collection Program Textiles accepted at PDO
	In May of 2019, Guelph and Wellington County were awarded the Smart Cities Challenge prize, which includes a $10 million grant from Infrastructure Canada to implement their Smart Cities vision: Our Food Future. With this funding, Guelph-Wellington aim to become an inclusive food-secure ecosystem and Canada's first circular food economy enforcement clear bag The focus of their vision is their 50x50x50 by 2025 initiative, which has the goals of: Increasing access to affordable and nutritious food by 50%; Creating 50 new circular business and collaborations; and Increasing circular economic revenues by 50% by recognizing the value of "waste". This Smart Cities vision includes collaborations with industry, academia, community organizers, and entrepreneurs. City has created a new staff role Circular Economy Specialist within solid waste to further CE initiatives.
Practices contributing to Diversion	City offers curbside collection of blue box and green bin to single and multi-family residents. The City has several diversion programs including: Promotion of Grasscycling Bike Reuse Goods exchange weekend Paint Reuse Program The City also operates the PDO at the WRIC, which includes the Recycling Zone where residents can drop off items such as blue cart recyclables, electronic waste, shredded paper, MHSW, YW and gently used textiles for reuse or recycling at no additional cost. The automated collection trucks are equipped with a camera to view the material emptied into the appropriate carts. This camera can identify improperly sorted items, and Solid Waste Resources staff will follow up with home owners or tenants to address any contamination or sorting concerns

Topic	Data Collected
Data Sources / References	https://guelph.ca/2018/05/city-shares-solid-waste-resources-business-service-review-final-report/ https://guelph.ca/wp-content/uploads/2018-WRIC-Annnual-Report.pdf https://www.haveyoursay.guelph.ca/smart-cities?tool=story_telling_tool
Contacts/staff	Phil Jensen Phil.Jensen@guelph.ca 519-822-1260 x 2636

District of Muskoka Jurisdictional Review Findings

Topic	Data Collected
Demographics	Permanent residents: 60,600 (2016 Stats Can) Seasonal residents: 82,000 additional Density: Includes Township of Georgian Bay (rural cottage area) seasonal population 16,000, permanent population 2,124.
Governance Structure	Two-tiered municipality, tax rate is set by the upper-tier (the District) and the lower-tier municipality (6 Area Municipalities). The District's portion of property taxes provides funding for waste management. The district is responsible for recycling and waste management.
Performance	RPRA Diversion Rate 2018: 45.5% RPRA Grouping: Rural Regional (#4)
	Garbage disposed: 206 Diverted (all): 172 Generated: 379
Facilities	District has one landfill. $13-million Rosewarne landfill extension will extend its capacity beyond 2041. EA submitted Sept. 2007, MECP approved Jan. 2009. TS: Plans for a new transfer station in Huntsville in 2020. TS Baxter serving seasonal (Town of Georgian Bay) open daily Mon-Sun and late until 8pm on Sundays. TS Tower Road - open in summer 4 days/week and late on Sundays 8pm
	MRF is located in Bracebridge. All recycling is transported there. Drop Off - 24-Hour locations accept household bagged garbage and sorted recycling only - no other types of wastes. Sites monitored by video surveillance. Some depots are open summer season only. Unstaffed bins (93) throughout the district are being moved to monitored depots, over four phases from 2020 to 2023, as per Ministry directive.
Collection	Curbside collection services include weekly (summer) and bi-weekly (winter) garbage collection, weekly recycling year-round, and weekly organics collection year-round to eligible households. Special collection services for leaf and yard waste, scheduled 4 times annually to eligible households in the organics collection area. The District not offer bulky/large item pick-up. Bulky items can be delivered to a conveniently located waste facility for proper disposal. Solid coloured garbage bags for waste - clear bags or blue boxes for recycling Garbage: weekly curbside collection, with limits, Mon to Fri. Seasonal - Town of Georgian Bay - Residents on seasonally maintained roads do not receive curbside collection during the winter collection season and deliver their own material to the nearest Landfill or Transfer Station. The last week of collection on Seasonal Roads is the week of October 22, 2018. Residents in cottage areas are strongly encouraged to use a garbage can or curbside garbage box ("bear-proof bin") to mitigate animal issues. Garbage boxes should have some means of identification to indicate municipal 911 address and a flag to indicate if waste is present for collection. Large item collection (barge and shore) events - cancelled during Covid. Township of Lake of Bays has no curbside collection. Private Companies wishing to apply for the purpose of depositing at the District's landfill or transfer sites must complete the Landfill/Lagoon Site Usage Credit Application - Commercial Only application.

Topic	Data Collected
Contracted Services	Waste Connections of Canada - residential waste collection services Blue Box materials goes to Waste Connections of Canada's MRF recycling facility in Bracebridge.
Programs	Reuse buildings at landfill and TS community drop-off bins for donations for reuse
	Recycling (two stream): separate containers and fibres curbside for residents Accepts all blue box items including film, foam and cartons
	Urban areas receive collection of Green Bin Organics. This includes food waste, soiled paper products and other compostable material. Muskoka's Backyard Compost Rebate Program - Eligible Muskoka residents could receive up to $40.00 towards the purchase of a Backyard Composter (to December 2019) Composting website with info including bear proofing. Compost Giveaway Events Fees associated with brush, limbs, branches, and trees at waste facilities. Must be weighed at scales. Kitchen waste accepted at 8 TS no charge.
EPR /Stewardship	HHW Drop-Off at Bracebridge depot (3 days/week) and at TS events, seasonal (July to Oct) Resident in Muskoka, can visit any Household Hazardous Waste event that is most convenient. Electronics: drop off at 6 selected District of Muskoka Transfer Stations during regular operating hours, no charge. Tires: drop off TS (no fees) or to a local retailer. List online.
P&E	Online engagement website, EngageMuskoka.ca Subscription service to Waste Management Guides to be notified when the webpage is updated Collection day and schedule "When is My Collection Day" webpage Muskoka Recycles app. Waste Wizard Tool -searchable tool helps find the best way or place to dispose of any item. Online Collection Calendar. PLC quarterly meetings minutes posted online - Rosewarne Landfill Public Liaison Committee (PLC) is an advisory Committee of Council. It was established to serve as a focal point for dissemination, consultation, review and exchange of information regarding the operation of the Rosewarne Landfill Site (Bracebridge), including environmental monitoring, maintenance, complaint resolution and new approvals or amendments to existing approvals related to the operation of the landfill site. Terms of Reference have been approved by the Engineering and Public Works Committee to ensure open communication and assist in maintaining high standards for the operation of the Landfill and the protection of the natural environment.
Partnerships	Partnership with Brendar Environmental - Household Hazardous Waste program partnership with Waste Connections of Canada – collections.
Efficiencies, Cost Savings and Innovative Approaches	Recently moved all bins away from lakes, rivers, and streams. At the direction of the Ministry of the Environment, Conservation and Parks (MECP) all of Muskoka's 80+ unlicensed bin sites will be removed by 2023.Bin sites are being removed since bin sites are not licensed and not compliant with the Environmental Protection Act. Pilot: The District is advancing a pilot project to service water-access and island residents in place of some bin sites being removed this summer. They have scheduled lakeside collection events this summer. District staff will be on-site to understand if this will be a viable alternative to service Muskoka's unique communities as they plan for long-term solutions. Events will be accessible via boat.

Topic	Data Collected
Budget	2020 Capital Budget and Forecast, 11.6% of total budget is waste management operations. Solid Waste Management Services are allocated under the rate supported budget rather than the tax based budget.
Staff	Commissioner of Public Works, Director Engineering & Environmental Services, Manager Solid Waste
Strategy/Plans	Garbage bag limits, unstaffed bin sites, compost services, recycling bin programs, a proposed compost and biosolids processing facility, and mandatory bylaw enforcement were all under review within the new strategy talks.
Policy	By-law 2019-51 - Governs Disposal Fees in 2020. Considering Mandatory diversion bylaws made participation in diversion programs compulsory by requiring separation of trash into specific waste streams. Would require a partnership with the area municipal bylaw officers to ensure enforcement.
	Violators will be prosecuted for improper use of video surveillance depot bins for garbage and recycling collection. Bylaw officers identify owners of illegal dumping, such as construction waste, and order for the immediate clean-up of the waste.
	Residential Weekly Garbage curbside Bag Limits - 2 bags of garbage/week per household in organics collection areas - 3 bags of garbage/week per household in rural areas Any bags over allowable limit at the curb must be affixed with a garbage bag tag, these can be purchased over the telephone for $5.00 each. Recycling: unlimited sorted. A medical exemption for Muskoka's waste collection limit is valid for one year. Landfill/TS: Three (3) standard size garbage bags or less per week, no charge. Considering reducing garbage bag limits from two per week in urban areas with curbside and green bin services, or three per week in all other areas to one per week in the former and two per week in the latter.
Future Regulations /Policy	Promotes tips for 3Rs and also "Refuse". Posted public information update regarding EPR future as a result of the WFOA.
	Expansion of the district's green bin, or food scrap compost, program. Proposed compost and biosolids processing facility. Aim is to increase residential food scrap diversion from three to 20 per cent within five years by increasing participation along current green bin routes, extending green bin services to all year-round roads and, potentially, some seasonal roads, adding green bin collection to transfer stations and more. At the insistence of some district council members, the district could also consider a green bin program for businesses, industries and institutions, which now dispose of the materials through private services.
	Mattress or Box Spring: $27.00 each accepted at 10 TS. No curbside collection.
	To promote diversion, commercial, industrial and construction waste was raised significantly in 2017 to promote recycling in Muskoka. Sorted, wood, brush shingles $99/tonne. Unsorted $197/tonne.
Practices contributing to Diversion	Multiple transfer stations and depots with multiple days and hours of operations, especially July to October.
Data Sources / References	https://www.engagemuskoka.ca/lakeside-collection-pilot https://www.muskokaregion.com/news-story/9603684-what-could-a-new-muskoka-waste-management-strategy-mean-for-you-/

Topic	Data Collected
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Contacts/staff	Fred Jahn, commissioner of engineering and public works Stephanie Mack, Director of waste management and environmental services, Bracebridge, stephanie.mack@muskoka.on.ca, 705-645-6764 wastestrategy@muskoka.on.ca Quinn Michell from – Public Awareness Representative

Peterborough County Jurisdictional Review Findings

Topic	Data Collected
Demographics	Population (permanent): 58,000 Seasonal: approximately 25,000 Density: 36 Hhlds: 24,000 curbside, 10,000 depot service only.
Governance Structure	Two tier upper tier (County) and lower tiers (8 Townships). Townships are responsible for collection and transportation of residential garbage to the landfill. 2 First Nations neighbour the Townships but are not in waste operations partnerships. One has a recycling contract with the County.
Performance	Diversion: Rural Regional RPRA grouping (#4) Targets set since 1989. Updated plan internally in 2013. Currently 60% by 2023. New target coming in new plan going out for RFP.
	Garbage disposed: 201 Diverted (all): 203 Generated: 404
Facilities	1 active landfill: owned and operated by jurisdictional Townships; residents can drop off. County and City jointly own the PCCWMF (landfill) since 2002. TS: all Townships operate their own transfer station(s). all depot materials go from TS to County landfill.
	City owns a MRF. County is a partner with the City. Townships have transfer stations/depots. BB material is brought to MRF.
Collection	Townships are responsible for their residential garbage collection. Varying collection systems and unique garbage collection contracts throughout the County by each Township. Creates communications challenges Partial user pay system for garbage bags and bag limits in place. Most have clear bag policy. A few remain to convert to clear bags.
Contracted Services	Townships have their own independent contracts for garbage collection and transfer. County contracts Emterra for Blue Box collection (in boxes only; no bags) and processing, Nov 2019. Waste Connections Canada is the County contractor for leaf and yard collections and the Bridgenorth organics collection.
Programs	Textiles: When residents call regarding clothing recycling, County staff promotes and educates them on donation of used clothing and household items to charitable organizations. Some donation bins at Environment Days events.
	Weekly collection County responsibility. Recycling (two stream): separate containers and fibres curbside for residents Accepts all blue box items including cartons, plastic film, black plastics, coffee cups. Not accepted: polystyrene foam.
	County responsibility. SSO curbside pilot in one village (Bridgenorth) is ongoing. Depot drop off of SSO at 4 transfer stations. Absolutely no plastic, including biodegradable or compostable bags accepted in organics programs. Curbside Leaf and Yard collection is available in 14 communities around the County. Drop off LYW programs are available for locations with curbside pick-up. Collect leaves, plants, brush and tree clippings in paper bags or reusable containers

Topic	Data Collected
EPR /Stewardship	County responsibility. MHSW: County responsibility. Household hazardous waste accepted at three permanent depots open June to October with limited hours. Batteries drop off at community locations or HHW events. Events are expensive to operate. Tires are Townships responsibility. Electronics accepted at depots/TS. Bulky plastics program - pails, toys, laundry baskets,
P&E	Staff - one dedicated P&E staff person - in corporate communications department; also responsible for social media communications. Searchable Waste Portal Personalized calendar. Sign up for reminders and more. Stickers (educational) on Blue Boxes if collector identifies improper sorting. Several CIF funded marketing campaigns (Mixed Plastics, Fibres Are In!) in partnership with Kawartha Lakes and Northumberland neighbours.
Partnerships	1993 Waste Management Plan was a joint plan with the City of Peterborough. County and City jointly own the PCCWMF (landfill) since 2002. City operates a MRF facility for Blue Box, electronics and MHSW. First Nations have some partnership as stakeholder consultation in master plan development.
Efficiencies, Cost Savings and Innovative Approaches	Ongoing monitoring of participation rates and waste characterization audits (full spectrum- all waste streams) for each Township. Clear bags - In cooperation with townships - 7-8 years ago, developed a "report card" council report. Individual townships waste performance were evaluated to see contributions to County's diversion and disposal. After this report card report, saw a lot of uptake and buy in. Saw 38% to 62% diversion increase due to clear bags implementation. Two townships did not implement clear bags. Landfill bans (City Bylaw) of multiple materials (BB, clean wood, LYW, drywall, building materials, MHSW and more). Technological upgrades to current facility - this will ensure that the County is producing high quality recycling, which will ensure continued access to strong markets for our recyclables during challenging times. New contract comes at increased cost. The total cost to each household will amount to an additional 13 cents/week/household. The current contracts have been in place for a decade, with only small increases for C.P.I. It is likely that the pricing no longer reflected the modern market. CIF Blue Box Project Funding in 2010: $74,807- This project involves the installation of solar powered compactors at two of the County of Peterborough's transfer stations to improve hauling efficiencies for fibres collected at the two sites. The compactors are solar powered and will be equipped with remote monitoring capability to allow staff to determine when the bins actually require replacement. This feature optimizes hauling frequency and reduces operating costs by avoiding the cost of hauling partially filled bins typical of pre-scheduled automatic pick-ups. Installation of compactors at the two sites is expected to reduce hauling costs by over $10,000/year with a project payback of approximately 4 years.
Budget	County and other municipalities paid the City $190,500 in 2019 for waste management services. Expenditures Landfill 2019 (City/County) $1.92 Mil Expenditures WM 2019 - $3.82 Mil Revenue WM 2019 $2.15 Mil Revenue Landfill 2019 $112,000

Topic	Data Collected
	Budget breakdown in avail budget file. City manages the shared landfill and has higher budget and costs.
Staff	Manager of Waste Management, Waste Management Administrative Coordinator. Waste Management Operations Coordinator- hazardous and depot collection depots sites owned by townships. Administrative Assistant- shared role- 20% to engineering.
Strategy/Plans	Waste Management Master Plan provides direction in managing all waste until 2030. The current plan, completed in 2013, will be updated soon. Had a 60% diversion target by 2022. Previous plan in 1993 was a joint plan with City of Peterborough. Internally, completed an organizational review in 2020. Posted in July 2020 on County web site.
Policy	County wide waste management bylaw. All Townships have bylaws regarding their specific bag limits, user pay and or clear bags policies. 2 bags or less bag limits.
	Bag tags/user pay/clear bags is enforced by Townships
	Townships responsible for their own individual bag limits.
Future Regulations /Policy	Impact to the County: The County's new curbside collection contract is valid until October 2026, meaning that the contract may need to be terminated early (Oct. 2019 report to council). During Spring 2020, Council chose Nov, 1. 2023 to transition to BB EPR.
	SSO curbside for a pilot study. SSO can be dropped off for composting. Promote backyard composting. Collect LYW; seasonal program. City is building their own GORE composting facility ($2.5 M) with partial funding from Federal Gov't. (LEAF), however the County is not a partner re the new compost facility to be located at the landfill.
	Mattresses for a $12 fee. Promote textile donation to charities.
	Some C&D waste materials must be segregated (wood, shingles, drywall). County supports recycled plastic content in plastic bags (May 2019 Council approval) www.recyclemorebags.com.
Practices contributing to Diversion	Set a diversion targets starting back in 1989 (40%) then in 2000 (50%) then in 2013 (60%). Multiple projects with the CIF to enhance their Blue Box program over many years and also in partnership with neighbouring City.
Data Sources / References	https://www.ptbocounty.ca/en/living/recycling-and-garbage.aspx Budget, Schedule "A" to By-law No. 2019-25 Council report -INF 2019-25 Regulatory Update - Transition of Blue Box Program to Extended Producer Responsibility, T. Stephens, Sept 2019 RPRA 2018 Datacall rpra.ca/programs/about-the-datacall. https://thecif.ca/cif-funding-process-overview/funded-projects https://www.ptbocounty.ca/Modules/News/index.aspx?feedId=35fd0008-f4f4-4e83-bed9-13630bba55e3&newsId=4276a84d-2d0d-4d1d-84f3-413979bee7cf#
Contacts/staff	Catrina Switzer, Waste Management Administrative Coordinator, 705-775-2737 CSwitzer@ptbocounty.ca

Wellington County Jurisdictional Review Findings

Topic	Data Collected
Demographics	Total Population 51,500 Households: 34,350 serviced curbside 105 multi-residential buildings Density: 84
Governance Structure	In 2001, at the request of the local municipalities, the County of Wellington accepted responsibility for all waste management services from its seven member municipalities. Over the intervening years, many changes have been made to the waste services and programmes provided to County residents. County's role: Engineering Services Dept., Solid Waste Services (SWS). SWS Committee meets monthly. Serves seven municipalities. (largest with pop. 10,000) SWS Mission Statement: developed by the Transition Team in 2000. Staff provide programmes to collect, divert or dispose of municipal solid waste and recyclables for County residents and businesses. Monitors curbside collection contract for waste and blue box recyclables; Organizes off-site event days for additional diversion opportunities; Offers customer service for drop-off at all waste facilities; Provides waste facility collection and diversion opportunities; Ensures safe and environmentally sound management of landfill operations and closed landfill sites; Considers long-term monitoring and assessment of site environmental performance; Monitors budgets and financial issues; Conducts research and policy development; Develops waste management and diversion strategies; Creates tenders and contracts; Collects and reports data; Directs promotion and education.
Performance	Diversion rate RPRA 2018: 39% Rural Regional RPRA grouping (#4) County 2018 report: Wellington County residents and businesses diverted 33.9% of their waste materials through the services and programmes offered by SWS.
	Garbage disposed: 177 Diverted (all): 111 Generated: 288
Facilities	One landfill site exists in Wellington County to accept all the waste gathered at six waste facilities. Closed landfill: Gerrie Road in Elora. Equipment: Purchasing Department issued and awarded a contract for SWS for a new Bomag Compactor.
	Six waste facilities in all seven municipalities. The sites accept paper products and food containers for recycling, tires, hazardous waste, wood and brush, textiles/clothing, scrap metal, electronics, and garbage.
Collection	Garbage- bi-weekly collection, i.e. every other week User pay garbage bags: $15 Package of Small Garbage Bags (10 bags per package) - dimensions 24"x 28" $20 Package of Large Garbage Bags (10 bags per package) - dimensions 30"x 38".
Contracted Services	Contents collected from green bins are taken to All Treat Farms in Arthur, where it is processed into compost.
Programs	Created reuse website: www.wellington.reuses.com
	Weekly collection. Trucks contain divided hoppers/bins where the papers and plastics are sorted. All residents have dual stream curbside collection, and all residents can use County waste facilities.

Topic	Data Collected
	Curbside: accepts all standard materials including cardboard (OCC), drink boxes and cartons, metal foil, and pie plates Not accepted: plastic film, Styrofoam. At depots, OCC has its own bins. Blue box program started in 1987.
	SSO: Weekly collection. New program just started July 7, 2020. Programme tools and informative resources inside green bin program roll out. The Green Bin organics collection programme has begun. All houses that receive curbside waste collection by the County of Wellington now receive weekly curbside collection of the green bin. Collection days are Tuesday to Friday each week. Green Bin webpage for details. No plastic bags, grass clippings, LYW, pet and human waste Liners: Compostable liner bags certified with the Biodegradable Products Institute (BPI) logo. No plastics. Any green bins containing plastic bags will NOT be collected. LYW: new annual curbside collection of leaf and yard waste in urban areas will begin in the Fall of 2020, and will occur every Spring and Fall.
EPR /Stewardship	Tires: accepts tires at no charge at all waste facilities; both on road and off road. Electronics: accepted at waste facilities at no charge and collected by Greentec. MHSW/Batteries: The County has a Mobile HHW Depot with its schedule posted online; one month at each location. Special HHW depots are located at five County waste facilities and are open year-round during operating hours. In 2018, 899 orange HHW boxes were given out to residents visiting the Mobile HHW Depot. Awarded (SWANA) Silver Excellence Award in the Special Waste category for the mobile depot.
P&E	Received a Silver Award in household category for 2017 Fall/Winter Newsletter, from the Municipal Waste Association (MWA). Recycle Coach Waste App - collection reminders and what goes where? The "recyclopedia" lists many household items and provides information on how to divert or dispose of them. CIF project: Pilot Promotion and Education project. Development of a web portal for the promotion of the recycling program. Web site includes a waste exchange element as well as program information. Usage of the website will be monitored to determine the effectiveness of the tool. Can subscribe to website updates. Feedback to: wasteinfo@wellington.ca, Solid Waste Services. Stickers: Collection crews place stickers on uncollected green bins to explain the main reasons for materials being left behind. https://lovefoodhatewaste.ca/ Helpful hints calendars, pens and magnets to help keep recycling ideas a part of every day. Gold Box: recycling drivers notice residents recycling items properly and consistently, they could be nominated and rewarded through the Gold Box program. Community outreach –e.g. Senior's lunch and learn, by SWS staff. Manager of Solid Waste Services interviewed on TheGrand101's Swap Talk, where he answered questions about services and programmes. Website designed by esolutionsgroup.ca.

Topic	Data Collected
Partnerships	Partners with neighbour-the City of Guelph - Solid Waste Services Smart Cities Initiative e.g. Our Food Future http://foodfuture.ca/ Partnership with the Canadian Diabetes Association Clothesline Programme. SWS partners with Switch Energy Corp. who collects agricultural film directly from the farmer. There are three types of agricultural plastic which can be recycled in the programme.
Efficiencies, Cost Savings and Innovative Approaches	CIF project: implemented multi-residential best practices including: complete site visits, update database, increase recycling cart capacity, develop and deliver new P&E materials. CIF project: developing two toolkits to support decision making with respect to complimentary blue box depot services. Determine why and when rural residents use County waste facilities, as well as to identify barriers to them participating in rural curbside collection of garbage and recyclables.
Budget	2019 County operating budget for solid waste management was 5% of $221.3 million which was $11.1 million. County property tax requirement for solid waste was 6% of $99.7 million which was $6.0 million.
Staff	County has a solid waste services manager.
Strategy/Plans	In 2015, County Council directed SWS staff to undertake a review of waste services to help focus the planning of the future of waste management and diversion in the County. The goal of this project is to provide the County with a long term strategy for all its waste operations and services, and how they are provided. The County has a Solid Waste Services (SWS) Green Strategy. All SWS programmes, projects and services are continuously assessed against the core green principles. They are assessed to determine how each may be impacting the environmental health of the County or the specific workplace, and to identify any opportunities for improvement. This information is used to guide future SWS efforts. An annual report is developed for Committee and Council and is posted in the Communications section of the SWS section of the County website. SWS staff are working with County Council to develop a long-term strategy which was scheduled to be completed in 2019.
Policy	By-law 5542-17 A by-law to authorize the Corporation of the County of Wellington to establish, maintain and operate a system to provide for the curbside collection of household and commercial waste and recyclable material. By-law 4547-03 A by-law to authorize the Corporation of the County of Wellington to establish, maintain and operate facilities to provide for the transfer and disposal of waste and recyclable materials.
	All bags require a paid bag tag. If tag is not on a bag, the bag is not accepted for collection and left behind at curb.
	Full user pay system, tags for garbage bags
Future Regulations /Policy	The County had to consider how to tender a new collection contract in light of the pending Blue Box transition in 2025-2025. They recommended that the blue box recycling program remains dual stream to not expand materials accepted in the blue box. The province envisions the standardizing of the blue box recycling system in the new EPR regulations.
	Started weekly SSO green bin program July 2020 to every household, rural and urban. Solid Waste Services Smart Cities Initiative foodfuture.ca Promotes food waste reduction on their site (full page)

Topic	Data Collected
	Mattresses: drop off only. Textiles: Canadian Diabetes Association Wood: clean, must be segregated from C&D Promote C&D reuse at www.wellington.reuses.com
	Created reuse website: http://www.wellington.reuses.com/?content=feedback Food waste reduction tips on website. www.wellington.ca/en/resident-services/sws-foodwastereduction, Links to https://lovefoodhatewaste.ca/ Waste app provides info for items that can be donated or reused Buy Local: Taste Real is a County initiative that supports local small businesses, farms and producers of food
Practices contributing to Diversion	Curbside service for all households. Multiple operations and projects in partnership with neighbouring City of Guelph. Local development and promotion of local business and food supply and reduction of food waste program. New implementation of SSO curbside cart program County wide to every household. Promotion of reduce and reuse.
Data Sources / References	www.wellington.reuses.com www.wellington.ca/en/government/solidwasteservices https://www.wellington.ca/en/resident-services/sws-foodwastereduction.aspx RPRA 2018 Datacall rpra.ca/programs/about-the-datacall. www.wellington.ca/en/resident-services/solidwasteservicesgreenstrategy County's SWS 2018 Annual Report www.wellington.ca/en/government/budgetarchives.aspx www.tvo.org/video/creating-a-circular-food-economy
Contacts/staff	Solid Waste Services, 74 Woolwich Street, Guelph,(519) 837-2601 Cathy Wiebe 1-866-899-0248 cathyw@wellington.ca

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2017 to 2019 Municipal Property Assessment Report
2017 to 2019 Tonnes Diverted from Landfill
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Bruce County

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