



SOLID WASTE SERVICES STRATEGY **Summary Report**

JANUARY 2021



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Table of Contents

1. Introduction	3
2. Background and History	4
3. Approach	5
4. Opening Remarks from the Chair of the Solid Waste Services Committee	6
5. Strategy Report Topics – Overview and Direction	7
5.1. Strategy Framework	7
5.1.1. Establishing Parameters of SWS Strategy	7
5.1.2. Establishing Timelines of SWS Strategy	7
5.1.3. Updating Groupings and Timelines of SWS Strategy	9
5.1.4. Foundational Framework	9
5.2. Grouping A: Provision of Curbside Services Topics	11
5.2.1. Rural Curbside Collection	11
5.2.2. Curbside User Fee	11
5.2.3. Single Stream vs. Two Stream Recycling	12
5.2.4. Cart Collection	13
5.2.5. Bulky Item Collection	15
5.2.6. Organics Collection	16
5.2.7. User Pay Bag Improvement	18
5.2.8. Additional Recyclable Materials Added to Programme	19
5.2.9. Collections and Processing Contracts – Timing, Length, Best Practices	20
5.3. Grouping B: Future of Waste Disposal Topics	21
5.3.1. Riverstown Expansion (i.e. Phase III)	21
5.3.2. Other Landfill Siting	22
5.3.3. Landfill Mining	23
5.3.4. Buffer Land Acquisition	23
5.3.5. Landfill Operations	24
5.3.6. Use of Closed Landfill Properties	25
5.3.7. Explore Technologies for Managing Waste	27
5.3.8. Mandatory Recycling	28
5.4. Grouping C: Waste Facility Optimization Topics	29
5.4.1. Optimal Number and Location of Waste Facilities	29
5.4.2. Vision of How to Use Waste Facilities	30
5.4.3. Explore Materials that Can Be Managed at Sites	31
5.4.4. Fee Options	31
5.5. Grouping D: Independent Topics	32
5.5.1. Involvement in Regional Waste Management Systems	32
5.5.2. Co-operative Contract Procurement	33
5.5.3. Master Composter Programme	34
5.5.4. Education on Reducing Food Waste	34
5.5.5. Tours and Presentations	35
5.5.6. Working with Industrial, Commercial and Institutional Sectors to Reduce Waste	35

5.5.7. Partnerships	36
5.5.8. New Outreach Tools	36
5.5.9. Spring Clean-Up Support	36
5.5.10. Earth Day or Other Event Days	37
5.5.11. Special Event Recycling	38
5.5.12. Setting Goals or Targets	38
6. Next Steps	40

1. Introduction

A municipal waste management master plan provides a strategic document summarizing the overall framework, direction, goals and targets for solid waste management, waste diversion and reduction programmes over the short, medium and longer-term horizon. The goal is to ensure a municipality's waste is managed in the most sustainable manner possible over the long-term. Waste management master plans articulate the goals and priorities of a municipality with respect to waste management planning.

Waste management services look very different in each community, as there are many factors which are unique to each municipality. The development of the Solid Waste Services Strategy was intended to provide the County of Wellington a waste management master plan which is suited to the local circumstances. As there are a variety of operational or service alternatives that a municipality can choose between of varying expense, benefit and environmental value, the purpose of Solid Waste Services Strategy is to provide a coherent and succinct guidance document which will provide a reference for decision making and service provision at the County over the short to long-term.

While the Strategy is a tool to aid in the development of waste management planning, it also must be flexible and be reviewed and updated periodically as dynamics in Wellington County and in the waste industry change.



2. Background and History

Until the early 1990's, waste management was the responsibility of the County's member municipalities. Things began to change when a group of five municipalities in Centre Wellington established a blue box recycling programme in 1987 to divert packaging and newspapers from landfill. That initial programme was expanded to all 21 member municipalities by 1989.

In 1991, the blue box programme was brought to the County level to manage, while the collection of garbage and operation of landfill sites remained the responsibility of the then 21 member municipalities.

In 1996, as part of a larger service review, County staff and Committee members began the process of determining how best to provide waste collection services to residents in the County.

In 1999, a Waste Management Transition Team consisting of County and municipal elected officials, as well as staff at both levels, was established. This Transition Team was tasked with developing a mission statement and guiding principles should Council approve accepting responsibility for waste services from the now seven member municipalities.

In June 2000, County Council and all seven member municipalities approved the transition of waste management responsibility to the County.

Since January 2001, the County has managed seventeen active and closed landfill properties, provided curbside collection of garbage and recyclables, and developed or enhanced additional diversion programmes and services.

In 2015, it was time to revisit the original Transition Team guiding principles and develop a long-term solid waste strategy to chart a course into the future.

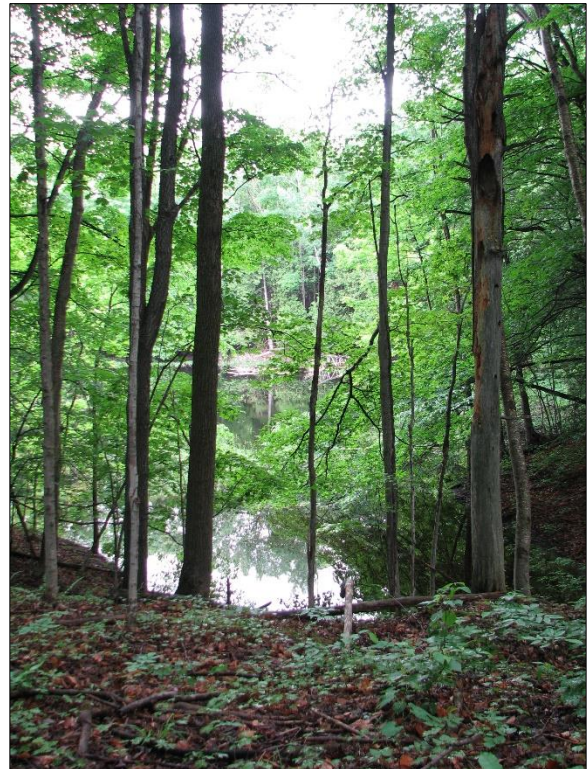


3. Approach

At the outset of the Solid Waste Services Strategy development, a list of topics was presented to the Solid Waste Services Committee for consideration. With the scope of the project established, these topics were grouped together into related categories, and were brought to the Committee over the ensuing three and a half years and deliberated upon.

Early on in the process, the decision was made to proceed with County-wide rural collection. As rural collection was expanded across Wellington County, the groupings of topics and original timelines were revised.

This Solid Waste Services Strategy Summary Report houses and summarizes the direction established by County Council on the various waste management topics and operational and service alternatives. Goals, Priorities and Guiding Principles of the Strategy were established, which balance the County's commitment to excellence in customer service, environmental stewardship and sound financial management. This report can be used as a resource, and provides a summary of each topic. It also provides the month and year the associated report was presented at the Solid Waste Services Committee and Council as well as the text of the Council Resolution.



4. Opening Remarks from the Chair of the Solid Waste Services Committee

The journey has been long but the results have been outstanding. Over the years many decisions were made by various Solid Waste Services (SWS) Committees. These decisions were adopted with the best information available at the time. Council's decisions over the years have been made with the environment and needs of the community in mind, all the while respecting the taxpayers of the County.

In 2015 the newly formed SWS Committee, with the assistance of excellent staff, began looking at all of the waste management operations and services that SWS oversees. Committee members were asking questions and searching for solutions on the environmental sustainability and future of our waste management system. Building upon the past Committee and Council decisions, we began looking at new priorities and directions, as new information and residents' desires have changed over time. A discussion paper was received by the SWS Committee and Council in September 2015 scoping out the topics that would be reviewed and the approach taken in completing the Solid Waste Services Strategy.

The Solid Waste Services Strategy establishes a set of long and short-term priorities and guiding principles for the County of Wellington. It balances good customer service, environmental considerations, emerging trends and landfill capacity while respecting tax impacts to our residents. This guiding document has provided direction in setting competitive Waste Tipping Fees, future direction for our waste transfer stations, protection of capacity at our Riverstown Landfill, and the collection of waste, recycling and organic materials on every municipal street and road in the County. As part of our commitment to environmental stewardship we have established pollinator habitat and food sources at our closed landfill sites to help sustain agriculture and our ecosystem in our mostly rural County. In 2020 we were very excited to implement new programmes; leaf and yard waste collection, weekly organics waste collection and enhanced educational programmes to support all of our works.

As Chair of the Solid Waste Services Committee I would like to thank all of those who have provided input into the Wellington County Solid Waste Strategy. The Strategy has been cultivated from the works of many invaluable staff members, numerous County Councils, public input and strategic studies. This Strategy has set the direction for our waste management operations and services, and will provide guidance to the County for many years to come.

Gregg Davidson, Chair of SWS Committee



5. Strategy Report Topics – Overview and Direction

5.1. Strategy Framework

5.1.1. Establishing Parameters of SWS Strategy

Over the years a number of waste management topics have come before the County of Wellington's Solid Waste Services Committee for discussion and consideration. The SWS Committee requested the development of a long-term strategy with these topics in mind, which was intended to articulate the County's priorities and guiding principles related to the provision of waste management services.

A non-exhaustive list of topics to be considered in this long-term Strategy analysis include:

- Review of blue box recycling and household waste programmes
- Disposal considerations
- Waste facility optimization
- User fees
- Landfill bans
- Additional site diversion materials
- Alternative technologies
- Co-operative arrangements with other municipalities
- Food waste management
- Extended Producer Responsibility and other waste minimization legislation
- Outreach
- Event days
- Goals

Resolution (*September 8, 2015*) – That the County staff, with the assistance of consultants as required, initiate the process of creating a report to chart the County's direction in Solid Waste issues into the future.

5.1.2. Establishing Timelines of SWS Strategy

The following list of topics was presented at the September Committee meeting for consideration for inclusion in the SWS Strategy Report. The list was accepted and was later sorted into three groupings:

Grouping A: Provision of Waste Management Services in the County

- Review of waste and recycling programmes
- Waste facility optimization
- User fees
- Additional site diversion materials



Grouping B: Future of Waste Disposal in the County

- Disposal considerations
- Alternative technologies
- Landfill bans

Grouping C: Independent Topics

- Co-operative arrangements with other municipalities
- Food waste management
- Extended Producer Responsibility and other waste minimization legislation
- Outreach
- Event days
- Goals

The suggested timeline for establishing the project parameters and studying the three topic groupings is provided below.

Figure 1

Project Timelines	2016				2017				2018			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Establish current baseline, set goals, guiding principles, parameters, evaluation criteria for project	■											
Grouping A		■	■	■	■	■	■					
Grouping B							■	■				
Grouping C									■	■		

Resolution (November 10, 2015) – That County staff, with the assistance of consultants as required, initiate the process of creating a report to chart the County’s direction in Solid Waste issues into the future.

5.1.3. Updating Groupings and Timelines of SWS Strategy

At the March 2016 Committee and Council meetings, a decision was made to expand rural curbside collection as soon as possible to the five member municipalities that were not receiving rural service at the time. With the decision to expand and implement rural curbside collection throughout the County, the original strategy timelines required adjustment. In October 2016 a slightly revised approach to the SWS Strategy study was recommended; that the curbside-related topics and the waste facility-related topics in Grouping A be separated.

The re-grouping of the topics followed:

Grouping A: Provision of Curbside Services

Grouping B: Future of Waste Disposal

Grouping C: Waste Facility Optimization

Grouping D: Independent Topics

Further, as implementing rural collection County-wide became a priority, a revised timeline was necessary. Below is the amended timeline for the completion of the various topic groupings.

Figure 2

Project Timelines	2017				2018			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Grouping A - Provision of Curbside Services	■							
Grouping B - Future of Waste Disposal			■					
Grouping C - Waste Facility Optimization					■			
Grouping D - Independent Topics	■							

Resolution (October 11, 2016) – That the report titled “SWS Strategy Study – Next Steps” be received for information.

5.1.4. Foundational Framework

A January 2017 report outlined the goals, priorities and guiding principles for the strategy topics based on the previously established SWS Mission Statement and Philosophy. The SWS Mission Statement and Philosophy are as follows;

SWS Mission Statement:

To collect and process solid waste, minimizing the use of landfill, in a cost-effective and environmentally responsible manner. The system will encourage the principles of Reduce, Reuse, and Recycle: through cost recovery; through partnerships with the private sector, organizations, governments and consumers; and through educational programmes.

SWS Philosophy:

- Provide safe, convenient, economical and efficient programmes for the collection and disposal of municipal solid waste and recyclables generated within the County of Wellington;
- Encourage and educate our ratepayers to reduce and divert the quantity of waste destined for disposal in a landfill site
- Pursue new and innovative ways to handle our waste; and
- Protect our natural environment by being good custodians of our active and our closed waste disposal sites

The Goals and Priorities listed below were developed for the purposes of providing a philosophical underpinning to provide the basis for decisions made during the Solid Waste Services Strategy analysis related to the services and programmes offered by the SWS Division. The Guiding Principles and Evaluation Criteria provide context and a framework of shared understanding which will aid in shaping the direction and output of the Solid Waste Services Strategy study.

Goals and Priorities:

- Excellent customer service
- Sound financial management
- Environmental stewardship

Guiding Principles:

- Triple Bottom Line Approach
- Treating landfill as an asset, a resource to be protected
- Maximizing diversion from landfill
- Focusing on long-term planning horizons
- Minimizing greenhouse gas (GHG) emissions associated with operations
- Promotion and Education
- Supporting circular economy principles within programmes, practices and operations

Evaluation Criteria: It was recognized that all aspects and implications of an issue or alternative need to be considered, measured and be subject to a rigorous analysis of costs and benefits. However, it can also be challenging and constraining to develop a rigid ranking system or set of evaluation criteria. It was proposed that the Solid Waste Services Strategy adopt a more fluid methodology of evaluating the costs and benefits of a given situation, while balancing the Goals and Priorities of providing excellent customer service, sound financial management, and environmental stewardship. For every topic that was advanced for discussion, costs, benefits and opportunities will be examined from all perspectives, and

solutions that best reflect the goal of providing an efficient, convenient and environmentally responsible waste management system will be recommended.

Resolution (*January 10, 2017*) – That the stated Goals and Priorities, Guiding Principles and Evaluation Criteria form the foundational framework that will influence decisions made throughout the SWS Strategy study.

5.2. Grouping A: Provision of Curbside Services Topics

5.2.1. Rural Curbside Collection

In 2001, the County of Wellington assumed responsibility for providing all waste management services from the County's seven member municipalities. It was deemed essential that SWS provide a uniform level of service to residents, but that rural and urban residents had different needs regarding curbside collection of waste and recyclables. The decision was made to provide curbside garbage and recyclable collection in "urban areas" (towns, villages, hamlets and other substantial concentration of homes), while waste facilities were available for residents of rural areas to dispose of their waste and recyclables.

Over the years on a number of occasions the SWS Committee discussed the potential expansion of County-wide rural collection of garbage and recyclables. The reasons discussed for considering rural collection of garbage and recyclables were equality and accessibility of service, resident satisfaction, waste facility optimization and an increase in the capture of blue box recyclables. Following public consultation and an analysis of the benefits of expanding rural collection, the decision was made to expand rural collection County-wide as soon as possible.

Resolution (*March 8, 2016*) – That staff implement County-wide rural collection on a bi-weekly frequency, effective July 1, 2016.

5.2.2. Curbside User Fee

The SWS Committee re-examined the user pay garbage fee structure in conjunction with the expansion of rural collection, considering two user fee scenarios:

- 1) The user fee structure agreed upon at January 2016 SWS Committee meeting of a \$0.50 increase for all bags: \$2.25 for large user pay garbage bags, and \$1.50 for small user pay garbage bags and for bags at the waste facilities.
- 2) A proposed standardized user fee structure, with the decision to expand rural collection County-wide: \$2 for large user pay garbage bags and for bags at waste facilities, and \$1.50 for small user pay garbage bags.



A standardized fee between bags delivered to waste facilities and the large user pay curbside garbage bag was decided to be a logical consequence of the provision of County-wide rural

collection, as the original rationale for a discounted fee at sites was because rural residents needed to “self-haul” their waste to the sites. With rural residents having universal access to curbside services, the rationale in having a discounted fee was removed.

Resolution (March 8, 2016)– That the SWS User Fees be amended as follows effective July 1, 2016 with the increase in revenues being allocated to General Reserves: \$2.00 for each large User Pay garbage bag, \$1.50 for each small User Pay garbage bag, \$2.00 for each bag of waste dropped off at waste facilities.

5.2.3. Single Stream vs. Two Stream Recycling

In support of the Strategy study, SWS commissioned SNC-Lavalin and Robins Environmental to assist in evaluating the various options for the provision of curbside collection services in Wellington County, in advance of the tendering of the next curbside collection contract. This analysis included a cost-benefit evaluation of single stream vs. two stream recycling. Single stream recycling involves the co-mingling of all designated recyclable materials into one stream of which residents place into one container. Two stream recycling involves the separation of designated recyclable materials into two different streams corresponding with a paper/fibre stream and a mixed containers stream, and residents must set them out in two separate containers for collection at the curb. The following assessment table displays the positive and negative impacts of single-stream recycling, compared to the County’s two-stream system.

Table 1

Consideration	Two-Stream	Single-Stream	Key Decision Points
Collection contract costs		✓	✓
Processing contract costs	✓		✓
Recycling sales revenue	✓		✓
Simplify participation rules		✓	✓
Volume of recyclables collected		✓	✓
Contamination of recyclables	✓		✓
Meets provincial legislation requirements	✓	✓	✓
Enforcement of contract specifications	✓		
Integrated collection system		✓	

While single stream recycling has been adopted by large urban municipalities and those operating automated cart collection in Ontario, most rural municipalities continue to collect blue box materials using a two stream approach. Single stream recycling may result in increased participation rates, reduced collection costs, and increased collection efficiencies.

However, single stream recycling presents processing challenges resulting in higher capital and operating costs. Single stream recycling also tends to produce lower quality materials equating to lower market prices, resulting in lower revenues.

Direction – That the County’s blue box programme remains a two-stream recycling programme.

Resolution (*June 13, 2017*) – That the Curbside Collection of Waste and Recyclables Contract CS2008-049 and the Processing & Marketing of Recyclables Contract CS2008-014, with Waste Management, be extended for a term of two years, with three one year options to renew, and that; Staff prepare the next Curbside Collection and Processing Request for Proposals when the specifics of the Waste-Free Ontario Act regulations are known.

Resolution (*March 12, 2019*) – That the specifications in the two identified Options be included in the Curbside Collection tender document for the purposes of receiving a competitive bid for curbside collections services, and; that All Treat Farms Ltd., of Arthur Ontario, be identified in the Curbside Collection tender document as the destination for organics processing services, and; that the direction provided on curbside collection service alternatives be endorsed as part of the Solid Waste Services Strategy.

5.2.4. Cart Collection

The County of Wellington has utilized a manual method of waste collection, rather than an automated cart-based system. The use of carts to store and collect garbage, recycling, and organics is a relatively recent phenomenon in Ontario. The introduction of carts for single family garbage and recycling collection has been, in part, a response to the changing composition of the recycling stream as well as for health and safety considerations. While a cart based programme typically is used with single stream recycling, there are some communities that have implemented a cart-based two stream recycling system. The table below highlights the potential strengths of changing to a fully automated cart collection system, vs. the current manual method used by the County.



Table 2

Consideration	Status Quo	Carts	Key Decision Points
Capital costs	✓		✓
Health and Safety – reduce worker injuries		✓	
Reduced collection contract costs		✓	✓
Cost of automated vehicles	✓		✓
Litter and animal control		✓	✓
Resident satisfaction	✓	✓	✓
Storage issues and property standards	✓		
Distribution system costs	✓		
Enforcement of contract specifications	✓		
Increase in recyclables collected		✓	✓
Less contamination of recyclables	✓		✓
Data analysis and resident response		✓	
Integrated waste management system	✓		✓
User pay system	✓		
Maneuverability (snow, gravel, long laneways)	✓		

Benefits of automated cart-based collection for residents include an increased ease of use and safety due to the wheels, flexibility to choose a cart size that matches each residents' needs, and cleaner neighbourhoods due to the lids acting as litter containment. Benefits of automated cart-based collection for the County and its contractors include safety for collection crew with less lifting, potential for fewer cart pickups during the year due to increased capacity in carts, and increased efficiency with collection due to quicker collection times with automated equipment.

Drawbacks of automated cart-based collection for residents include the need for large storage space for carts, and a lack of convenience for rural residents with long driveways. Drawbacks of automated cart-based collection for the County and its contractors include expensive initial costs associated with procurement and distribution of carts, need for large storage space for carts, high cost to purchase automated cart loading collection vehicles resulting in higher contractor costs, and an expected increase in contamination.

Direction – That automated cart collection not be implemented by the County at this time.

Resolution (June 13, 2017) – That the Curbside Collection of Waste and Recyclables Contract CS2008-049 and the Processing & Marketing of Recyclables Contract CS2008-014, with Waste Management, be extended for a term of two years, with three one year options to renew, and that; Staff prepare the next Curbside Collection and Processing Request for Proposals when the specifics of the Waste-Free Ontario Act regulations are known.

Resolution (March 12, 2019) – That the specifications in the two identified Options be included in the Curbside Collection tender document for the purposes of receiving a competitive bid for curbside collections services, and; that All Treat Farms Ltd., of Arthur Ontario, be identified in the Curbside Collection tender document as the destination for organics processing services, and; that the direction provided on curbside collection service alternatives be endorsed as part of the Solid Waste Services Strategy.

5.2.5. Bulky Item Collection

Bulky waste items include large items such as furniture, mattresses, and carpets that cannot fit into a user pay garbage bag, or an automated cart, and require a separate collection method. Municipalities typically provide a dedicated bulky waste curbside collection service and/or accept bulky waste from residents at a public drop off depot. In Wellington County, residents are required to bring bulky waste to any of the County’s six waste facilities where regular fees apply. The opportunity for the County to collect bulky waste items at curbside was examined, including whether collection is desirable and in what circumstances it would be appropriate to collect bulky waste from curbside. The following table evaluates a curbside bulky item collection service, against the status quo use of waste facilities to receive and dispose of large waste materials:

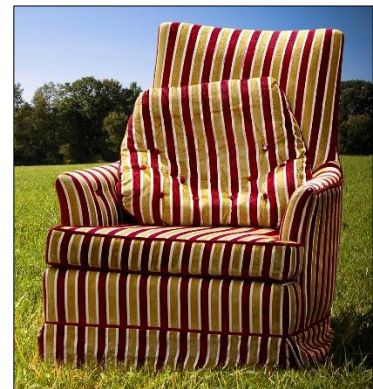


Table 3

Consideration	Waste Facilities	Curbside	Key Decision Points
Collection contract costs	✓		✓
Diversion opportunities	✓		✓
Resident convenience - collection		✓	✓
Resident convenience - availability	✓		✓
Integrated waste management system	✓		
Health and Safety and property standards	✓		✓

Bulky item collection services are costly to operate, typically make it difficult to divert items from landfill, are usually on a pre-scheduled basis making it less available to residents than a drop-off programme, and can lead to health and safety issues with bulk items being left curbside for long periods of time. On the other hand, collecting bulky items from the end of a resident's driveway is convenient, inasmuch as it does not require the resident to load the bulky materials into a vehicle in order to bring them to a waste facility.

Direction – The decision to collect bulky waste at curbside was deferred until a decision was made on the best use of the County waste facilities. With the eventual decision to maintain all of the County's waste facilities, the option for bulky item collection was not selected in the curbside collection contract.

Resolution (*March 12, 2019*) – That the specifications in the two identified Options be included in the Curbside Collection tender document for the purposes of receiving a competitive bid for curbside collections services, and; that All Treat Farms Ltd., of Arthur Ontario, be identified in the Curbside Collection tender document as the destination for organics processing services, and; that the direction provided on curbside collection service alternatives be endorsed as part of the Solid Waste Services Strategy.

5.2.6. Organics Collection

On May 30, 2019 the County received proposals in response to the Curbside Collection of Waste and Recyclables Request For Proposals (RFP), project CW2019-020. This RFP provided pricing on a seven-year curbside collection contract, with three one-year renewal options. RFP submissions were asked to include pricing for three different curbside collection service options:

- 1) Status Quo
 - Curbside collection of bagged garbage and recyclables in a two stream blue box system
 - Weekly collection in urban areas, bi-weekly in rural areas
 - Collection on one side of the road on rural Town/Township roads
- 2) Standardized Weekly (no organics collection)
 - Curbside collection of bagged garbage and recyclables in a two stream blue box system
 - Weekly collection in urban and rural areas
 - Collection on both sides of the roads
- 3) Standardized Weekly + (with organics collection)
 - Curbside collection of bagged garbage, source separated organics (i.e. green bin), and recyclables in a two stream blue box system



- Weekly collection of organics and recyclables in all areas, bi-weekly collection of bagged garbage in all areas
- Collection on both sides of all roads

Pricing for optional services such as leaf and yard waste collection and bulky item collection were also requested. The pros and cons to the implementation of an organics programme, as well as a leaf and yard waste programme, were evaluated.

Public consultation via a representative survey of Wellington County residents found 64% would use an organics collection service if it were available. As most of the County's neighbouring municipalities provide curbside organics collection, many residents expect this level of service, especially those who are new to the County of Wellington. Organics processing capacity is currently almost non-existent in Ontario, and some communities may choose to secure capacity while it is still available. An organics collection programme is expected to divert as much as 2,000 tonnes of organic waste from landfill initially, saving approximately two years of landfill capacity. This amount is expected to grow over time with increased participation rates. Diverting organics from landfill not only saves landfill space, but it also reduces rates of methane and leachate generation. Another environmental benefit of an organics programme, is the opportunity it provides to recover organic waste and turn it into nutrient-rich compost that can be used in residential or agricultural applications.

There are many benefits to collecting and diverting organic waste, however, the cost of doing so has been a barrier for some municipalities. While there are also financial savings associated with collecting and diverting organic waste, such as the savings from reduced leachate generation and extending the life of the landfill, these savings can be challenging to quantify accurately.

An option for a leaf and yard waste collection programme was also requested in the RFP document. These programmes are common in Ontario, and many, if not all of the same described benefits of managing and diverting source separated organic waste from landfill, also apply to the diversion of leaf and yard waste. Many of the County's member municipalities were not providing leaf and yard waste management services, and the option to provide this service in urban areas was selected.

Resolution (June 13, 2017) – That the Curbside Collection of Waste and Recyclables Contract CS2008-049 and the Processing & Marketing of Recyclables Contract CW2008-014, with Waste Management, be extended for a term of two years, with three one-year options to renew, and that; Staff prepare the next Curbside Collection and Processing Request for Proposals when the specifics of the Waste-Free Ontario Act regulations are known.

Resolution (June 11, 2019) – Staff be directed to award the Curbside Collection of Waste and Recyclables Request For Proposals (CW2019-020) to Waste Management, of Mount Forest, for the Standardized Weekly + (with organics collection) service option, and that; The Leaf and Yard

Waste collection option for designated urban areas of the County be selected for inclusion in the curbside collection programme.

5.2.7. User Pay Bag Improvement

In the waste industry, a user pay system is considered a best practice. It provides an incentive to reduce waste disposal by maximizing participation in diversion services in order to reduce the amount of waste a household must pay to dispose of. Some user pay systems require the purchase of “bag tags”, small stickers that are affixed to garbage bags, in order for the bags to be collected for waste disposal. This system is similar to the County’s requirement for residents to purchase specific garbage bags, in order to utilize waste collection services. The table below displays a comparison of the benefits to using user pay bags vs tags.

Table 4

Consideration	Bags	Tags	Key Decision Points
Cost to purchase		✓	
Quality control issues		✓	
Storage and distribution requirements		✓	✓
Ease of identification and enforcement	✓		✓
Enforcement of contractor	✓		✓
Manipulation	✓		✓
Counterfeiting	✓		✓
Cost and ease of use to residents	✓		✓

While the user pay tags are more cost-effective to produce, are associated with less quality control issues, and are easier to store and distribute, there are more benefits to using user pay bags, especially considering the key decision points of customer service, financial responsibility, and environmental protection. User pay bags are easier to identify from the road and upon inspection at the Riverstown landfill, making curbside collection and enforcement of the collection contractor more efficient. It is also much easier for residents to manipulate or counterfeit user pay tags, and they can be placed on various sizes of garbage bags. The user pay bags are a consistent two sizes, aiding in providing a fair collection programme. Finally, user pay bags are more affordable to residents than tags, as a tag system requires residents to purchase regular garbage bags as well as tags

Direction – That the County of Wellington continue using a user pay bag system for garbage, rather than a tag-based user pay system.

Resolution (March 12, 2019) – That the specifications in the two identified Options be included in the Curbside Collection tender document for the purposes of receiving a competitive bid for curbside collections services, and; that All Treat Farms Ltd., of Arthur Ontario, be identified in the Curbside Collection tender document as the destination for organics processing services, and; that the direction provided on curbside collection service alternatives be endorsed as part of the Solid Waste Services Strategy.

5.2.8. Additional Recyclable Materials Added to Programme

From time to time, new materials are added to municipal blue box programmes as markets for these materials develop, or because there is a desire to recycle and divert as many materials as possible. The County of Wellington has always been conservative in adding new items to the blue box programme, taking care to ensure established markets will lead to blue box additions being long-term solutions. The table below displays the pros to expanding the list of acceptable blue box materials vs keeping the County’s blue box programme status quo.



Table 5

Consideration	Status Quo	Expand Materials	Key Decision Points
Collection contract costs	✓		✓
Diversion opportunities		✓	✓
Resident satisfaction		✓	✓
Meets provincial legislation requirements	✓		✓
Market potential	✓		✓
Processing contract costs	✓		✓
Maximize sales revenue	✓		✓

Expanding the list of acceptable materials in the County’s blue box programme creates more waste diversion opportunities, and increases resident satisfaction in knowing that more of their waste materials are now considered “recyclable.” However, there are more benefits to maintaining the current acceptable materials list in the County’s blue box programme at this time, as the introduction of more recyclables materials would mean increased collection and processing costs for the County. Further, all materials that have established commodity markets are currently included in the County’s blue box programme, meaning that there are no new materials that can be added to this list that are easy to collect, with robust markets.

Finally, under a Province-wide full producer responsibility landscape, it is expected that there will be one standardized blue box programme across Ontario, and adding new materials into the County's programme may require a reversal of this decision in the near future.

Direction – That additional recyclable materials not be added to the blue box programme at this time and will be deferred until the Waste-Free Ontario Act determines which recyclable materials are to be included in the future Blue Box Programme Plan.

Resolution (*March 12, 2019*) – That the specifications in the two identified Options be included in the Curbside Collection tender document for the purposes of receiving a competitive bid for curbside collections services, and; that All Treat Farms Ltd., of Arthur Ontario, be identified in the Curbside Collection tender document as the destination for organics processing services, and; that the direction provided on curbside collection service alternatives be endorsed as part of the Solid Waste Services Strategy.

5.2.9. Collections and Processing Contracts – Timing, Length, Best Practices

The curbside collection and processing of waste in the County of Wellington are contracted services. The collection contract with Waste Management was set to expire on June 30, 2019, but was extended for one year until June 30, 2020, with a new contract required for July 1, 2020. Research was done to craft the curbside collections contract in order to achieve maximum cost-effectiveness and flexibility. Various service and programme alternatives were assessed, and a request for proposal was sent out asking for pricing for three different options:

- 1) Status Quo
 - Curbside collection of bagged garbage and recyclables in a two stream blue box system
 - Weekly collection in urban areas, bi-weekly in rural areas
 - Collection on one side of the road on rural Town/Township roads
- 2) Standardized Weekly (no organics collection)
 - Curbside collection of bagged garbage and recyclables in a two stream blue box system
 - Weekly collection in urban and rural areas
 - Collection on both sides of the roads
- 3) Standardized Weekly + (with organics collection)
 - Curbside collection of bagged garbage, source separated organics (i.e. green bin), and recyclables in a two stream blue box system
 - Weekly collection of organics and recyclables in all areas, bi-weekly collection of bagged garbage in all areas
 - Collection on both sides of all roads

Four proposals were received, including a proposal from Waste Management with diesel trucks, as well as a proposal from Waste Management with compressed natural gas (CNG) trucks. CNG

trucks produce 15% less greenhouse gas emissions, 50% less nitrous oxide emissions, generate virtually zero particulate emissions, and are far quieter vehicles compared to diesel trucks.

The three collection options were analysed and compared, taking into account the following criteria; level of service, Waste-Free Ontario Act implications, integrated waste management system implications, environmental considerations, and financial considerations. The options to include leaf and yard waste collection and bulky item collection were also examined.

Resolution (June 13, 2017) – That the Curbside Collection of Waste and Recyclables Contract CS2008-049 and the Processing & Marketing of Recyclables Contract CW2008-014, with Waste Management, be extended for a term of two years, with three one-year options to renew, and that; Staff prepare the next Curbside Collection and Processing Request for Proposals when the specifics of the Waste-Free Ontario Act regulations are known.

Resolution (June 11, 2019) – That staff be directed to award the Curbside Collection of Waste and Recyclables Request for Proposals (CW2019-020) to Waste Management, of Mount Forest, for the Standardized Weekly + (with organics collection) service option, and that; The Leaf and Yard Waste collection option for designated urban areas of the County be selected for inclusion in the curbside collection programme.



5.3. Grouping B: Future of Waste Disposal Topics

5.3.1. Riverstown Expansion (i.e. Phase III)

The County of Wellington commissioned environmental consultant, SNC-Lavalin, to prepare an analysis of the various waste disposal options that the County may wish to implement following the closure of the current approved waste filling area at the Riverstown landfill. The Riverstown Phase II development was scheduled to reach capacity in approximately 2043 (note: 2050 is the revised date that Riverstown will be at capacity as a result of recent enhanced or new diversion programmes). Expanding the Riverstown landfill was one option that was evaluated.

Expanding the Riverstown landfill is the future waste disposal option with the lowest cost, least complexity, and greatest likelihood of public acceptance. Expanding the landfill will require studies and receipt of approvals, however, most of the information required for these investigations is already known (e.g. geology, hydrogeology, geochemistry, background water quality and historical data). There is also site infrastructure already in place at the Riverstown landfill, such as a scalehouse, scale, equipment garage, and public drop-off area.

Resolution (May 8, 2018) – That the expansion of the Riverstown landfill site be adopted as the current preferred alternative option for meeting the County of Wellington’s future waste management needs as part of the SWS Strategy, and that; Future strategy updates and studies revisit this currently preferred alternative.

5.3.2. Other Landfill Siting

In SNC-Lavalin’s report, siting another landfill property was evaluated as an option to implement following the closure of the current approved waste filing area at the Riverstown landfill.

Landfills are very challenging to site. There are many factors which go into site selection, such as hauling distances, available properties for sale, proximity to water bodies or courses, proximity to concentrations of dwellings, proximity to incompatible neighbouring land uses, and the geology of a given site. Once a preferred site has been selected, it is subject to costly and time-consuming environmental studies and approvals to ensure its suitability. The various required approvals can be delayed or denied in the face of sustained local opposition. It is worth noting, there has not been a new landfill developed in Ontario in over 21 years.

Resolution (May 8, 2018) – That the expansion of the Riverstown landfill site be adopted as the current preferred alternative option for meeting the County of Wellington’s future waste management needs as part of the SWS Strategy, and that; Future strategy updates and studies revisit this currently preferred alternative.



5.3.3. Landfill Mining

The County of Wellington commissioned environmental consultant, SNC-Lavalin, to prepare an analysis of the benefits and challenges associated with landfill mining. The term landfill mining describes a process where previously buried waste is excavated and processed for a variety of beneficial purposes. Two major benefits of landfill mining include regaining and re-utilizing capacity, and recovering valuable resources that were buried, such as metal, aluminum, and plastics. Some challenges with landfill mining are the high costs, lengthy process, complex project designs, and an increase in odour and pests leading to complaints from local residents or businesses.

There are a number of reasons why landfill mining is not currently recommended; there are no current environmental concerns that would justify landfill mining, and the majority of the County's closed landfill sites are small in size and would result in poor economies of scales. Further, a more appropriate time to consider landfill mining would be near the end of life of the Phase II mound at the Riverstown landfill.

Resolution (*February 13, 2018*) – That the County of Wellington not consider landfill mining operations at this time. As solid waste industry factors change, this landfill management process may be revisited at a future date.

5.3.4. Buffer Land Acquisition

The County of Wellington analysed whether there is a need to consider obtaining buffer lands adjacent to County active or closed landfills. The utilization buffer land adjacent to a landfill reduces the likelihood of odour, noise and dust complaints, while also mitigating risk associated

with environmental factors such as the migration of leachate or methane towards, or on to, neighbouring properties.

All 17 of the County-owned waste sites have undergone some remedial works and/or have had buffer area added to one or more of the property boundaries. An existing 2014 policy authorizes staff to negotiate for the acquisition of buffer property where appropriate. Currently, the Riverstown landfill is considered a priority site for buffer land acquisition. Acquiring additional buffer property at the County's only active landfill would help ensure continued and future compliance with environmental standards, reduce the likelihood of potential remedial actions, and mitigate the risk of noise, odour, and dust complaints.

Resolution (*February 13, 2018*) – That the current policy for property acquisition for lands surrounding County waste facilities, as approved in April 2014, be endorsed and included as part of the Solid Waste Services Strategy.

5.3.5. Landfill Operations

The County of Wellington commissioned environmental consultant, SNC-Lavalin, to prepare an analysis of two operational issues relating to the upcoming closure of the Riverstown landfill's Phase I development, which is estimated for late 2021 or early 2022:

- 1) Interim Closure Option – In a landfill, waste gradually degrades, and settles under its own weight. This consolidation occurs over the course of years and can lead to considerable volume reduction. Rather than applying final cover at the time the waste reaches its maximum elevation in Phase I, the County could seek permission from the Ministry of the Environment, Conservation and Parks (MECP) to apply an interim cover. While Phase II operations are underway, the Phase I waste mound would gradually settle below the maximum allowable elevation of 450 metres above sea level. For every metre of settlement that occurs across the waste mound, 37,000 m³ of volume capacity could be regained (which is equal to approximately a year of landfill capacity) and would be able to be reutilized.
- 2) Leachate Treatment Options - Leachate is generated when water from rain or snowmelt infiltrates into a waste mound and percolates through the underlying waste, collecting dissolved and degrading components. Phase I of the Riverstown landfill was not required to implement leachate collection and treatment, and instead, manages leachate through the natural attenuation process. However, the Phase II development at Riverstown is required to be an engineered site, complete with leachate collection and treatment processes. There are a variety of leachate treatment methods and technologies, and SNC-Lavalin assessed many options, including the preferred Municipal Wastewater Treatment Plant option.

Resolution (*June 12, 2018*) – That County staff be directed to seek out a leachate treatment solution at a local municipal waste water treatment plant, and that; If this option is unavailable, staff are authorized to solicit a Request for Proposals for proven on-site leachate treatment

processes, and that; Staff shall pursue approvals for an interim closure of the Riverstown landfill's Phase I development.

5.3.6. Use of Closed Landfill Properties

In 2001 the County of Wellington assumed responsibility for all waste management operations from its member municipalities, including ownership and responsibility for 17 active and closed waste disposal sites. All the active landfill sites have ceased disposal operations except the Riverstown Waste Facility. Five of the 16 closed sites currently host transfer facilities, where waste, recyclables and other divertible materials are collected, bulked and transported to various receiving facilities. The remaining 11 closed landfill sites are typically located in rural settings and access is restricted to County staff and consultants. Alternate uses of the County's closed landfill sites were considered, including:

- 1) Naturalization – The current use of closed landfill properties includes gradual and incremental efforts of naturalizing these properties through the planting of trees and shrubs. This approach is common for landfills in rural areas, where the sites can be better integrated with their surrounding natural environment. Planting native trees, shrubs, and other vegetation can help local wildlife and insect populations, while also emphasizing environmental philosophies. This selective, incremental approach is low-cost and is also in keeping with the operating terms and conditions contained in the County's ECAs.



- 2) Pollinator habitat – Pollinators provide one of the planet’s most important ecosystem services, and are essential to the agricultural sector. Studies on pollinator populations suggest there is a large decline in their numbers due to a variety of factors that impact their health. The waste management sector is specifically identified as a promising stakeholder and potential partner in establishing new pollinator habitat due to the large areas of land that is government owned and usually not in active use. The option of enhancing pollinators at the County’s closed landfill properties is a low-cost initiative that is environmentally beneficial, supportive of local agriculture, and is an impactful educational opportunity for County residents.



- 3) Recreational use – There are many potential recreational uses of closed landfill sites, including sports fields, parks, golf courses, skiing/tobogganing hills and playgrounds. These types of uses are typically more appropriate for closed landfill sites that are situated in urban or suburban settings. There are a number of complicating factors with converting a landfill site to a recreational destination, such as risk of methane issues, jurisdictional issues, and concerns with unauthorized access resulting in liabilities or damages to equipment. Due to the rural nature of most County sites, in combination with the mentioned complicating factors, recreational use is not appropriate for most of the County’s closed landfill sites.
- 4) Renewable energy generation – Some landfill properties host solar or wind power installations on marginal, unused areas of the site. This land use can emphasize environmental stewardship while either generating revenue or powering on-site buildings or infrastructure. Without a compensation arrangement, such as the Feed-In-Tariff programme, and without the need for on-site electrical requirements at the County’s closed landfill properties, renewable power generation does not appear to be a viable option at this time.

- 5) Agricultural use – Agricultural land uses on closed landfill sites are somewhat uncommon. Sites that have chosen this end use typically have a thick landfill cap of impermeable material, followed by the installation of geosynthetic and drainage layers which are overlain with a thick layer of topsoil. Crops that do not require significant topsoil depth for growth are then planted in the topsoil. There is no requirement for landfills in Ontario to line the clay cap with geosynthetic and drainage layers, so there could be concerns with food safety and draining. Further, most of the County’s closed landfill sites are quite small in size and some have very uneven terrains, which are not conducive to agricultural uses. Thus, agricultural use of closed landfill sites is not a viable option in the County of Wellington.

Resolution (*November 14, 2017*) – That staff continue with the naturalization of closed landfill sites, and that; Staff plan, design, and establish pollinator habitats at closed landfill properties, where appropriate.

5.3.7. Explore Technologies for Managing Waste

The County of Wellington commissioned environmental consultant, SNC-Lavalin, to prepare an analysis of the various waste disposal options that the County may wish to implement following the closure of the current approved waste filling area at the Riverstown landfill. The Riverstown Phase II development is scheduled to reach capacity in approximately 30 years. Various waste management technologies were evaluated, and SNC-Lavalin identified four alternate waste disposal methods for the County to consider in future years:

- 1) Energy from Waste (EfW): Waste treatment process that creates energy from a waste source that would have otherwise been disposed of in a landfill
- 2) Thermal Treatment: Waste treatment process that creates energy from waste without directly burning the waste. Three options were explored:
 - i. Pyrolysis
 - ii. Gasification
 - iii. Plasma Arc Waste Disposal
- 3) Aerobic Digestion in a Biocell: Reintroduction of collected leachate supplemented with water to maintain moisture levels in a landfill. The micro-organisms responsible for decomposition are thus stimulated to decompose at an increased rate with an attempt to minimize harmful emissions.
- 4) Mixed Waste Processing (or “Dirty MRFs): Facilities that accept all municipal waste including organics, recyclables, and non-recyclables inorganic material, as a single stream. The material separation process sorts and segregates each stream, then sends to market or for further processing. Residual waste is landfilled or sent to an EfW facility.

The various technologies evaluated are very costly, and some have not yet been proven to operate effectively and efficiently, especially with the relatively small volumes of waste that the County generates. In addition, proposed alternate technology waste management systems often meet similar public resistance to those raised by proponents of new landfill sites.

Resolution (May 8, 2018) – That the expansion of the Riverstown landfill site be adopted as the current preferred alternative option for meeting the County of Wellington’s future waste management needs as part of the SWS Strategy and that; Future strategy updates and studies revisit this current preferred alternative.



5.3.8. Mandatory Recycling

Under Ontario Regulation 101/94, municipalities in Ontario that provide waste management services to over 5,000 residents must provide a recycling programme. However, residents have the choice to participate in the recycling programme or not. The concept of mandatory recycling is used as a tool to encourage residents to participate in recycling programmes, to increase diversion from landfill and conserve energy and resources by recycling targeted materials. Three different policies some municipalities use to support mandatory recycling are:

- **Clear Bag Policies:** Waste collectors look to ensure there are little to no recyclables in the garbage before collecting the garbage bag. This tool requires higher contract costs for the additional duty required by collectors, and can lead to frustrated residents illegally dumping their uncollected garbage. There is also the likelihood of residents’ complaints around privacy issues with clear bags, even with the allowance of a small opaque “privacy bag.”
- **Material Specific Landfill Bans:** With landfill bans, the banned material cannot go into the landfill site. These bans can be on recyclables in general, or a specific material, such as cardboard. In order to enforce a recyclable material landfill ban, some form of enhanced inspection must occur either at the waste facility and/or at the curbside. There are significant challenges with enforcing these bans, and they tend to be used more as an educational tool.
- **Mandatory Participation in Diversion Programmes:** This method of enforcing mandatory recycling would require residents to set out blue boxes and/or green bins, in order to have their garbage collected. There are some issues associated with enforcing this type of policy, such as the potential for residents to bring blue boxes inside after recycling collection but before garbage collection, leaving the garbage collector to believe blue

boxes were never set out. This sort of policy can generate ill will with the public, by placing onerous requirements to participate in curbside programmes.

None of the above methods of enforcing mandatory recycling were recommended. The County already utilizes a full user pay programme, which is considered a best practice in providing incentive to divert as many recyclables from landfill as possible. Furthermore, through waste composition audits conducted annually, the County continues to have a high capture rate of recyclables.

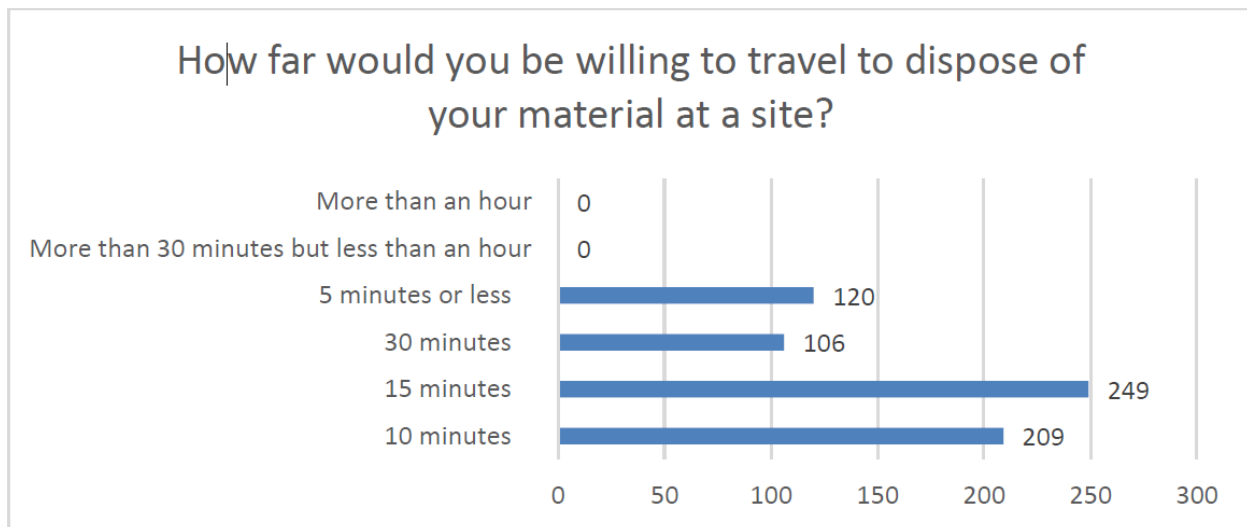
Resolution (June 12, 2018) - That for the purposes of the Solid Waste Services Strategy, the County of Wellington will not proceed with any mandatory recycling policies, and that; This approach will be revisited when it is deemed appropriate to do so.

5.4. Grouping C: Waste Facility Optimization Topics

5.4.1. Optimal Number and Location of Waste Facilities

SWS staff analyzed waste facility site trends and usage to determine the ideal number and location of waste facilities, in order to balance operating costs, customer service levels, and supporting diversion of waste materials from landfill. Balancing residents' expectations around service levels with financial and environmental considerations involves many competing factors. Solid Waste Services staff undertook a two-week survey of site users at all waste facilities in August 2018. The table below shows the responses to a question on travel time:

Figure 3



Staff have identified four different approaches to the future number and location of the County's waste facilities. These alternative approaches are; to develop a new waste facility, to close waste facilities, to redistribute waste facilities, and to focus on enhancing diversion opportunities at the waste facilities as much as possible. Each alternate approach has been

assessed against the status quo, according to level of service, potential financial impacts, potential environmental impacts, and flexibility to change.

Resolution (*February 12, 2019*) – That Solid Waste Services staff proceed with planning to transition the County of Wellington’s waste facilities to a Diversion Centre model, and that; Staff further investigate the direction received from County Council on the future best use of the County’s transfer stations, and that; This approach be endorsed as part of the Solid Waste Services Strategy.

5.4.2. Vision of How to Use Waste Facilities

The best use of existing waste facilities was assessed, including whether waste facilities should continue to be used as they are now, or whether they should be reconfigured into Diversion Centres. Reconfiguring waste facilities to a Diversion Centre model is an approach that can be utilized regardless of whether the decision is made to maintain, or to change, the current number and/or location of sites. The concept of transitioning to a Diversion Centre model would mean that the County would reallocate finite space and resources at waste facilities to divert materials from landfill that are currently not being separated from the waste stream. In order to manage and divert additional materials cost effectively at the waste facilities, more residents and businesses who utilize transfer stations for their regular bagged garbage and blue box recycling must be encouraged to use the curbside services to meet their waste disposal needs. This would lead to greater capacity to manage and divert new materials at the sites.

Using the County’s transfer stations as Diversion Centres also provides flexibility should the provincial government designate new material to be managed through stewardships programmes, such as small appliances, mattresses, and carpets. The Diversion Centre model allows for the ability to separate additional materials from the waste stream, divert them from landfill, and potentially receive funding for doing so.

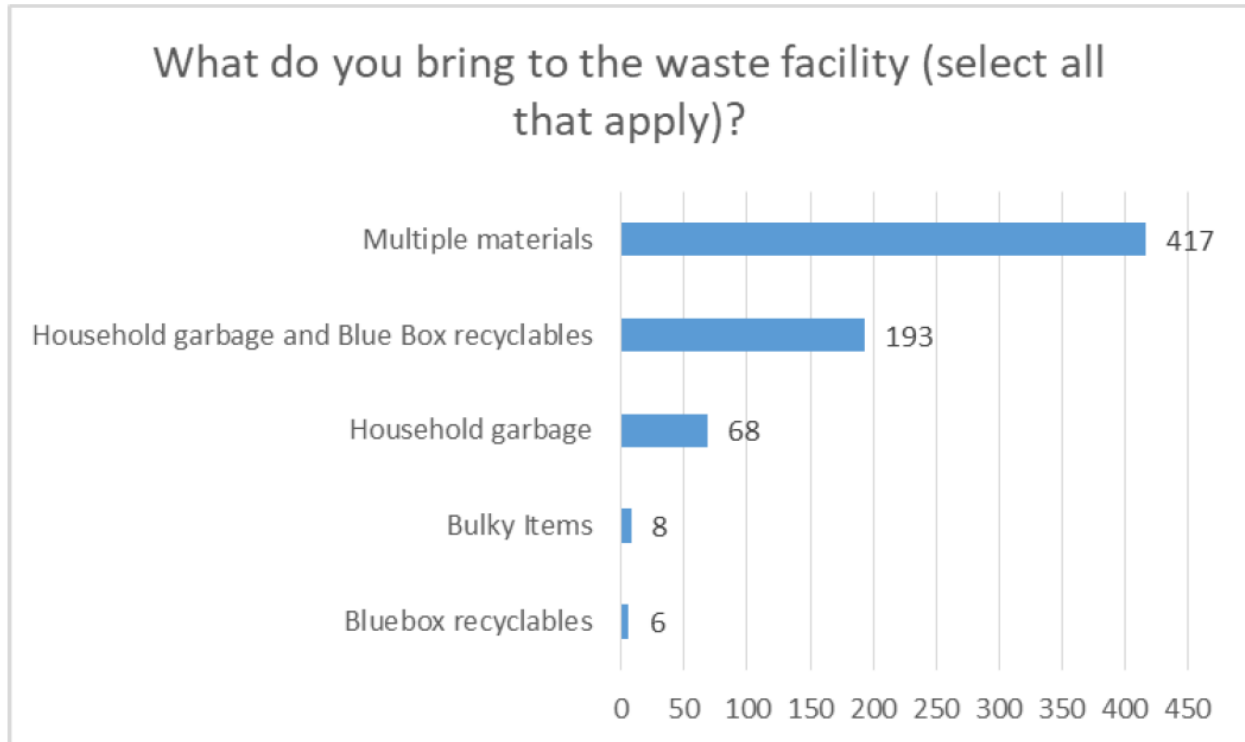
Resolution (*February 12, 2019*) – That Solid Waste Services staff proceed with planning to transition the Wellington County’s waste facilities to a Diversion Centre model, and that; Staff further investigate the direction received from County Council on the future best use of the County’s transfer stations, and that; This approach be endorsed as part of the Solid Waste Services Strategy.



5.4.3. Explore Materials that Can Be Managed at Sites

The County's five transfer stations allow for the management and diversion of a number of materials, many of which are challenging or not possible to effectively manage through curbside collection. The results from the August 2018 survey of site users below shows that most residents and businesses drop off a variety of materials when they use the County's waste sites.

Figure 4



Increasing the materials that can be collected and diverted will continue to enhance patron satisfaction and environmental and landfill capacity benefits. Materials to be explored for diversion at waste facilities include leaf and yard waste, shingles, drywall, plastic bags, mattresses and carpet.

Resolution (*February 12, 2019*) – That Solid Waste Services staff proceed with planning to transition the Wellington County's waste facilities to a Diversion Centre model, and that; Staff further investigate the direction received from County Council on the future best use of the County's transfer stations, and that; This approach be endorsed as part of the Solid Waste Services Strategy.

5.4.4. Fee Options

Possible changes to the fee structure at the County waste facilities were evaluated with support from Watson & Associates Economists Ltd. Some options evaluated were minimum waste fees,

surcharges for unsorted loads, waste tipping fees, and removing tipping fees on diversion materials such as brush and scrap metal.

The application of a minimum waste fee for disposing of garbage is a common practice at many municipal waste facilities. The minimum waste fee for dropping off garbage is typically in the \$5 to \$10 range. With a minimum fee to drop off garbage in place, many of the weekly users of the sites would have a financial incentive to switch to the curbside collection service, allowing additional capacity to accept and divert more materials, such as leaf and yard waste, shingles and potentially other materials. A minimum fee would also generate some revenue, which may offset the costs of managing and diverting new materials. However, implementing a minimum waste fee at the sites may not be well received by users of these facilities, as this would represent a significant change to the current patron experience.



As a result of the analysis provided in the Watson report, the County chose to increase waste tipping fees to the average tipping fee of six neighbouring municipalities, which had an average tipping fee 43% higher than in Wellington County. It was suggested that the County consider a phased approach to tipping fee increases, helping residents adjust to the fees.

Resolution (November 12, 2019) – That the Solid Waste Services User Fee recommendations as outlined in the report be approved for inclusion in the 2020 Solid Waste Services User Fee Schedule.

5.5. Grouping D: Independent Topics

5.5.1. Involvement in Regional Waste Management Systems

A regional waste management system typically involves a number of municipalities co-operating together in a mutually beneficial arrangement to provide certain waste management services. These approaches often avoid redundancy by sharing resources, which can result in cost efficiencies. Creating a central solid waste authority comprising of a number of municipalities is relatively rare in southern Ontario, as it can be quite complex. Instead, the County of Wellington will consider opportunities that may be available to further partner with other municipalities in the region.

Current or potential future opportunities include:

- Food waste reduction initiatives: SWS staff have met with staff of neighbouring municipalities to discuss collaborating on food waste reduction initiatives.
- Health and safety initiatives: SWS staff helped organize a Safety Summit in Toronto in April 2018, through the County's representation on the Solid Waste Association of North America's Ontario Chapter Board of Directors. There are plans to continue the momentum that the event generated through the hosting of similar events related to safety in waste management operations.
- Participation in alternate waste disposal systems: SWS staff will assess any future proposals of opportunities to partner with other municipalities in the utilization of alternate waste disposal methods, such as an energy from waste facility, where the ash could then be disposed of at the Riverstown Landfill.

Resolution (May 8, 2018) – That the approach for considering current or future collaboration opportunities in regional waste management systems be endorsed and included as part of the Solid Waste Services Strategy.

5.5.2. Co-operative Contract Procurement

Co-operative purchasing as a means to obtain more competitive pricing and reduce costs has been part of the County's purchasing practices for many years. The County's purchasing policy encourages departments to "work through the Wellington County Public Sector Consortium or similar public or private purchasing association to make one-time, lease or contract purchases." In the SWS Division, staff utilize the Consortium, and other standing contracts where possible, including the purchase of fuel for heavy equipment, promotional materials, cell phones and uniforms. Staff have also actively participated in outside organizations' joint bid documents, such as in 2012, when purchasing multi-residential recycling carts and in-unit recycling bags through the Continuous Improvement Fund. These co-operative purchases have resulted in significant cost savings for the County.

SWS staff will continue to take part in discussions to identify opportunities to participate in joint procurement activities. Staff have also had some preliminary discussions with neighbouring municipalities to identify opportunities to work together on food waste reduction campaigns in our communities. Pooling staff resources, research, and promotional tools on this topic can result in enhanced education campaigns.

Resolution (May 8, 2018) – That the staff approach of continuing to seek out opportunities to collaborate with other County departments and Ontario municipalities to share information and develop co-operative procurement contracts where practical, be endorsed and included as part of the SWS Strategy.

5.5.3. Master Composter Programme

The Master Composter programme was initiated in 2009 as a way to provide hands-on composting training and support to residents than can be completed by municipal staff. The majority of the key components of the plan for the Master Composter programme have already been implemented, such as continuing to sell backyard composters at a subsidized rate, conducting annual composting workshops for residents, and creating promotional materials.

However, there are additional components of the Programme yet to be implemented:

- Recruit and provide training and information resources for Master Composters, and possibly establish a compost hotline and/or online training opportunities, and set up temporary booths at libraries, SWS sites, community centres, and farmers' markets
- Create demonstration gardens at SWS facilities and in the community
- Research programme funding opportunities
- Consider other future initiatives such as:
 - Free home delivery of composters
 - Other distribution opportunities such as municipal tree days or farmers' markets
 - Establish partnerships with other departments or organizations such as Housing, Green Legacy, and horticultural societies
 - Establish community composting programme(s) perhaps at community garden locations

Direction (November 13, 2018) – That a survey be initiated by SWS staff to determine County residents' current food waste management practices and identify barriers to home composting, in order to prioritize efforts to maximize diversion through home composting in the County of Wellington.

5.5.4. Education on Reducing Food Waste

While composting is an important tool for managing food waste, following the 3R's can reduce food waste as well. Reducing food waste will not only benefit the environment, but also present cost-savings for the County's waste management system and support those in our community who struggle with food security. The County has a full user pay programme for garbage, which provides a financial incentive to reduce waste in general. However, even with that tool, a recent residential waste audit conducted in the County found, on average, 33.4% of the contents in garbage bags comprised of food waste.

Education will play a key role in changing people's behaviour. Many people don't realize just how much food they are wasting, or what they can do to prevent it. In



British Columbia, the Ministry of Environment found that for every \$1 invested in educating residents on food waste reduction, there was an estimated \$3.40 to \$5.50 return on investment in reduced disposal costs for municipalities. The UK’s successful “Love Food Hate Waste” campaign offers simple and practical tips for storing food and using up ingredients, and planning tools to avoid over-purchasing food. The County is in a position to provide support to farms, local restaurants, and food retailers to reduce food waste, which together account for 29% of the total food waste generated. Working with Economic Development and the Taste Real initiative, the County could offer support, education, and information to reduce and divert food waste in these sectors. Some opportunities include encouraging consumers and businesses to buy local, to support their community food banks, and suggesting innovative ways to market food.

Resolution (*November 13, 2018*) – That the Food Waste Management Strategy be endorsed as part of the Solid Waste Services Strategy, and that; Solid Waste Services staff initiate a baseline residential food waste survey as soon as practical.

5.5.5 Tours and Presentations

A key component to successful waste diversion and management programmes is public engagement. The most successful promotion and education programmes make use of multiple tools. SWS uses many media tools to educate the public, such as newspaper ads, newsletters, e-news, an annual calendar, social media, and telephone conversations. SWS also conducts workshops, presentations and tours for various public groups to educate them on solid waste services and waste reduction practices. SWS would like to enhance the content and frequency of such workshops, presentations, and tours to continue engaging residents and businesses on solid waste services and waste reduction practices.



Resolution (*May 9, 2017*) – That the report “SWS Strategy – Community Engagement” be endorsed, and that; The new position of Community Engagement Coordinator be approved for implementation as soon as possible in 2017.

5.5.6. Working with Industrial, Commercial and Institutional Sectors to Reduce Waste

Resident engagement is important, but businesses and other organizations also need to know there are services and programmes available to them to reduce waste, and how they can be accessed and utilized correctly. There is value for businesses and institutions in understanding

the many environmental, social, and financial benefits of waste reduction, and value to the County in supporting increased diversion from landfill.

Resolution (May 9, 2017) – That the report “SWS Strategy – Community Engagement” be endorsed, and that; The new position of Community Engagement Coordinator be approved for implementation as soon as possible in 2017.

5.5.7. Partnerships

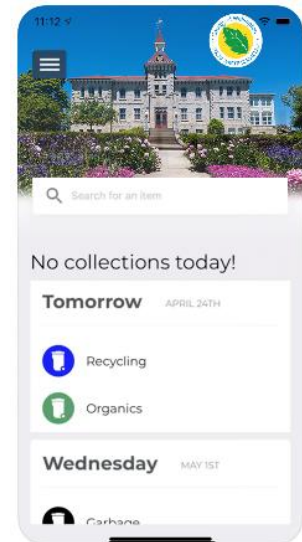
Another way to engage the community is through partnerships with other organizations. These partnerships can be used to educate youth and adults on waste reduction as well as inform them of the solid waste services available to them, including many waste diversion programmes. Some organizations that the County can look to partner with are school boards, Wellington-Dufferin-Guelph Health Unit, other municipalities, local businesses and community groups.

Resolution (May 9, 2017) – That the report “SWS Strategy – Community Engagement” be endorsed, and that; The new position of Community Engagement Coordinator be approved for implementation as soon as possible in 2017.

5.5.8. New Outreach Tools

SWS currently uses a variety of tools and technologies to engage the community. Some of these tools include social media, e-news, telephone conversations, and a website that is updated frequently. However, in order to achieve the goals and guiding principles of the County’s long-term waste strategy, and inform people’s views and habits, it is beneficial to expand upon the current suite of promotional tools. SWS staff have identified several tools and technologies that can be utilized to engage residents and businesses. Two of these opportunities include:

- The development of a “waste app” to enhance knowledge of curbside collection schedules and diversion options for various materials
- The creation of educational YouTube videos



Resolution (May 9, 2017) – That the report “SWS Strategy – Community Engagement” be endorsed, and that; The new position of Community Engagement Coordinator be approved for implementation as soon as possible in 2017.

5.5.9. Spring Clean-Up Support

Over the years, the County’s SWS Division has hosted a number of special event days, including Household Hazardous Waste (HHW) and Waste Electronics Event Days, and composter and rain barrel sales. SWS has also supported recycling and waste diversion efforts at a number of

special events, such as spring clean-up days, festivals and fairs. Establishing and formalizing a strategy for SWS involvement in events and initiatives will provide for a consistent and reliable approach for County staff and event organizers.

In recent years SWS has supported a spring clean-up day event in Puslinch Township where litter has been collected from all roads in the Township. This support presents itself in the acceptance of bagged collected litter at the Aberfoyle Waste Facility at no charge, while also providing County roll-off containers at the Township works garage as an additional location to receive collected litter. SWS proposed enhancing spring clean-up supports through extending a formal invitation to other member municipalities to organize their own annual spring clean-up days, and by offering the same support provided to the Puslinch event.

Resolution (April 10, 2018) – That the enhanced approaches be endorsed and included as part of the Solid Waste Services Strategy.

5.5.10. Earth Day or Other Event Days

Holding event days can be beneficial in expanding knowledge and awareness of environmental issues in the community, and can lead to increased and improved diversion activities and reduced waste. Although SWS staff have promoted waste reduction themed events through traditional media in the past, SWS does not currently host any such events. This is due to the lack of available staff time and resources required.

There are a number of environmental and waste reduction events or activities that are held annually throughout Canada. Some of the more prominent events are:

- Earth Day: What started in the United States as a day to focus on bringing about improved environmental protection, has now expanded to over 200 countries and has become an important tool for children to learn about environmental sustainability.
- Waste Reduction Week: A national programme focused on the circular economy, resource efficiency, and waste reduction, with a different focus for each day of the week.



Although it may be challenging to organize and host waste reduction events, SWS can take an incremental alternate approach to these initiatives by enhancing promotion and support of these events. Over time, SWS will revisit whether there is an ability to further enhance involvement in various waste-themed events.

Resolution (April 10, 2018) – That the enhanced approaches be endorsed and included as part of the Solid Waste Services Strategy.

5.5.11. Special Event Recycling

There are many special events that are held annually in Wellington County, including festivals, fairs, and shows. SWS provides recycling services to these events when the services are requested with sufficient notice. SWS supplies blue boxes and/or recycling carts and/or roll-off bins, and arranges for these to be emptied on a timely basis. In some cases, SWS has provided additional signage and actively worked with the event organizers to reduce contamination and improve recycling recovery.

A more proactive approach was proposed, where SWS staff would seek out event organizers and provide them with information on the recycling services available to them through the County. Over time, SWS staff may consider taking on an even more proactive approach by requiring recycling and waste reduction standards at all special events in the County of Wellington.

Resolution (*April 10, 2018*) – That the enhanced approaches be endorsed and included as part of the Solid Waste Services Strategy.

5.5.12. Setting Goals or Targets

Over the years, many municipalities have chosen to develop recycling goals or targets. These provide objectives to work towards and help encourage communities to continually assess their programmes and services, and seek opportunities for improvement in their diversion performance. The MECP has established a minimum goal of a 60% capture for all recyclables for Ontario Municipalities. The capture rate is the percent of acceptable recycling materials that end up in the recycling stream as opposed to in the waste stream. In 2009 County Council approved the Blue Box Recycling Plan, which set a goal to achieve a minimum 85% capture rate of all acceptable blue box materials by 2014 in the County. Periodic waste composition studies support the data aggregation and analysis to assess this and other metrics. This data highlights which acceptable blue box items have a lower capture rate, allowing for targeted promotion and education campaigns to improve capture rates. Overall, the County's blue box capture rate tends to remain around 80%. This suggests that County residents are doing a very good job with recycling, but there is room for improvement.

Capture rate is an appropriate metric to utilize as a target because results of promotion and education efforts and improved access to convenient, reliable collection and drop-off services are quantifiable. Some municipalities have chosen to use their diversion rate as a metric of choice for recycling targets, which is the percent of materials managed through 3Rs



programmes compared to the percent of materials landfilled. The practical upper limit for communities without a curbside organics collection programme is typically 45-50%, and 60-65% for communities with a green bin service. The County of Wellington's 2016 diversion rate was 40%, which would be difficult to significantly increase without introducing a green bin organics programme. A municipality's diversion rate can be a challenging metric to influence, as there is a trend towards "lightweighting" packaging and more news is consumed online rather than through newspapers. These trends are causing blue box weights to decrease, impacting diversion rates. For these reasons, utilizing a capture rate as the preferred metric to target for improvement may be the most practical choice yielding tangible results, while being a measure more within the County's realm of influence.

Resolution (*September 8, 2018*) – That the current capture rate target and approach of striving for continual improvements in performance for all waste management programmes and services be endorsed, and included as part of the SWS Strategy.

6. Next Steps

The Solid Waste Services Strategy provides a framework for the path to be taken on various waste management topics related to operational, financial, service and environmental considerations. With the direction established through the Strategy, staff have guidance to proceed in the work of meeting these commitments.

Solid Waste Services compiles and releases an Annual Report each year. As an accountability measure, a report card will be included in the 2020 Annual Report to monitor the progress made towards meeting the various strategic goals, objectives and commitments that the Strategy has established.

Some of the work of implementation has already begun, as the curbside collection services were enhanced through the expansion of rural collection in 2016, and with the addition of standardized services and a green bin programme through the County's new curbside collection in 2020. Work on many other projects is either underway or is planned, including delivering on the County's environmental objectives of establishing pollinator habitat at closed landfill sites and in reducing and diverting food waste through the Our Food Future initiative, in partnership with the City of Guelph.

While reporting back to County Council on the progress of the Strategy's commitments is important, it should be recognized that strategic reports must be considered living documents, subject to change to suit residents' needs and a dynamic waste industry with ever-changing legislation, technology and environmental considerations.

Most waste management master plans undergo periodic updates, typically in five year increments. It is intended that this Strategy will be reviewed and updated in 2024, in order to ensure that it still reflects the goals and objectives of this community.

