

AUGUST  
**2014**

# Oxford County Waste Management Strategy

## Let's Talk ... **Trash**

A road map for reducing, handling, and disposing of waste generated in Oxford County.

 **Oxford County**  
*growing stronger...together*



AUGUST  
2014

# Waste Management Strategy

## Executive Summary & Final Recommendations



The strategy is defined by three main sections:

- 1) Residential Curbside Collection Programs;
- 2) Residential Diversion Programs; and
- 3) Industrial, Commercial and Institutional Programs.

### EXECUTIVE SUMMARY

In December 2011, the County of Oxford engaged GENIVAR Inc. to lead the development of an Integrated Waste Management Plan (Appendix A). The plan was presented to County Council in February 2013 at which time Council requested that further public engagement be conducted (see Appendices B, C and D). During the additional consultation process, Council directed staff to develop a County focused Waste Management Strategy; this Strategy was presented to County Council on May 14, 2014. Recognizing the importance of developing a County focused waste

management plan that captured the views and opinions of residents, the County initiated several public engagement activities during the months of May and June. Details on the public engagement process can be found in Subsection 2.6, as well as Appendices E, F, and G.

The extensive consultation process undertaken to develop the Strategy, allowed the County to develop a plan that reflects public opinion on current and future waste management needs.

## Executive Summary & Recommendations

In addition to receiving general comments on the Draft Strategy, the community was asked to weigh in on the following issues:

- Level of satisfaction with the current recycling collection schedule.
- Willingness to move to a six-day collection cycle if it reduces program costs.
- Whether or not receiving an additional blue box would promote further recycling and willingness to pay an increase to receive a new blue box.
- Perception of value of the large article collection program.
- Perception of value for re-launched backyard composting program.



Throughout the Strategy, text boxes have been inserted into the document to identify where changes were made to the Draft Waste Management Strategy (released in May 2014) as a result of the engagement process.

In doing this, the community is able to see how their input directly affected the outcome of the System Improvement Options recommended in Section 6 of this document.

STRATEGY



Overall, public opinion identified that there was a fairly equal split on the level of satisfaction with the current garbage and recycling collection schedule, but that an increase in recycling collection is desirable. A similar split was noticed when residents were asked about their willingness to move to a six-day collection cycle. However, residents were concerned that a rotating collection day, as proposed under the six day collection cycle would be too confusing for residents. Public opinion also showed that there is a strong desire for the continuation of the curbside large article collection program, but that program modifications would be tolerated to improve program performance (Subsection 3.6 and Section 6). Lastly, as a result of the consultation process, several System Improvement Options were combined into one under the title Garbage and Recycling Contract Procurement Process. Doing this allows the County to obtain further insight into the potential impacts of curbside collection program changes from the perspective of both service and cost efficiencies.

Executive Summary & Recommendations

CONCLUSION

**CONCLUSION**

Strategy findings indicate there is much to be gained through consolidation and standardization of programs. For ease of review, the System Improvement Options can be found in Section 6 of the Strategy, as well as summarized in the following table.

It should be noted that where possible, the County has tried to quantify the financial and tonnage impact of each option. However, not all improvement options are quantifiable, while other options need to go through the tendering process to obtain an accurate financial and tonnage impact. Regardless, these System Improvement Options offer opportunities for the County to achieve program streamlining, consolidation, and standardization of operations, which ultimately affects costs and tonnages.



**BY THE NUMBERS**

58%

Amount of residential waste diverted from landfill in 2012

#6

Oxford County's ranking out of 230 municipalities in Ontario for diverting residential waste

#1

Oxford County's ranking for diverting residential waste within its grouping of similar municipalities

33,000

Vehicles that came to the Waste Management Facility in 2013

17,000

Tonnes of material was diverted for recycling at the transfer station last year

45,000

Tonnes of garbage was landfilled last year

30

Years of landfill life left

24%

Volume of waste in garbage bags is recyclable

5%

Homes that do not comply with bag tag practices (as determined by audit)

125,700

Population expected to increase to in 2041, up from 106,000



## Executive Summary & Recommendations

### RECOMMENDATIONS

The County of Oxford is proposing 18 System Improvement Options that, if implemented, are expected to help waste management programs perform better, divert more waste from the landfill, and manage associated costs.

SERVICE IMPROVEMENT OPTIONS	FINANCIAL IMPACT <i>(savings)</i>	TONNAGE IMPACT
1. Rename the Oxford County Landfill Site	No Impact	No Impact
2. Develop a Bag Tag Vendor Kit	\$2,000 annually	No Impact
3. Amend the Current Fees and Charges By-law 4889-2007	No Impact	Marginal Impact
4. Increase Curbside Education and Awareness	(\$67,000) annually	715
5. Bag Tag Pricing Sustainability Program	Up to (\$80,000) annually	Marginal Impact
6. Garbage and Recycling Contract Procurement Process	(\$750,000) annually*	876
7. Purchase My-Waste App Software	\$5,000 annually	No Impact
8. Identify Local Transfer Station	(\$78,000) annually*	No Impact
9. Development of Curbside Set Out Promotion and Educational Material	\$10,000 annually	987
10. Develop a Standardized Curbside Collection By-law	No Impact	716
11. Implement a User-Pay System for Large Article Collection	(\$440,000) annually*	450
12. Re-launch the County's Backyard Composting Program	\$135,000 one time*	250
13. Develop Standard Operating Procedures for the operation of Municipal Brush, Leaf and Yard Waste Depots	\$5,000 one time	No Impact
14. Perform Operational and Cost Efficiency Analysis on Municipal Brush, Leaf and Yard Waste Depots	(\$100,000) annually	No Impact
15. Discontinue Scrap Metal Depots and Decrease the Number of Special Waste Collection Events	(\$25,000) annually	No Impact
16. Explore Partnership Opportunities with Not-For-Profit Agencies for Special Waste Collection	No Impact	400
17. Development of Established Performance Metrics for Monitoring and Measurement of Program Performance	No Impact	No Impact
18. Implement Landfill Material Bans and an IC&I Waste Diversion Promotion and Education Program	\$200,000 one time \$80,000 annually	3,400

*\*to be confirmed through tender process*

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## 1 INTRODUCTION

Waste Management Strategies are developed for the purpose of providing a road map for reducing, handling, and disposing of generated waste. The Strategy details the various types of waste generated, their origins, as well as steps that can be taken to lower the level of waste, and plans for removing and potentially eliminating waste. The purpose of this plan is to develop a clear and concise road map for waste management planning specific to the needs of the County of Oxford. This plan takes into consideration the County's desire to investigate alternative methods to landfilling, in order to extend the life of the County's landfill site.

In order to develop this plan, the County relied on the consulting services of GENIVAR Inc. to perform an assessment of the County's current waste management system, compare the performance of the County's system to several municipalities of similar size and composition, as well as develop viable diversion strategies over the short and longer term. GENIVAR's efforts resulted in the development of an Integrated Waste Management Plan for the County (see Section 2.5 of this document and Appendix A) which was presented to County Council in February 2013. The contents of this report represent GENIVAR's views and opinions on what the County's waste management system should look like in the years to come.

At the time that this plan was presented to Council, the County's residential waste diversion rate for 2010 was 54%, as reported by Waste Diversion Ontario (WDO). The residential waste diversion rate is the percentage of Blue Box and other residential waste material reported to WDO that is kept out of the landfill. WDO has since updated their waste diversion statistics, concluding that in 2012 the County increased its residential diversion rate to 58%, resulting in an overall provincial ranking of 6 out of 230 municipalities and first out of comparable municipalities.

Public engagement also played an important role in the development of this plan. Input was obtained on the County's current waste management system. As well, residents were asked to comment on possible changes to the system. The results of these efforts are contained in Section 2.6.

In preparing this report, waste generated by both the residential and the industrial, commercial and institutional (IC&I) sectors were examined. Historically, focus has been on the residential sector as Provincial regulatory requirements, funding, and diversion targets have been based on waste generated by this sector. In order to balance the waste management system, greater focus on IC&I generated waste is required. This Strategy will explore waste diversion options, and develop cost effective and program efficient service options for both the residential and IC&I sectors.

Data sets from various sources were used in the preparation of this document and remain unchanged from its original source.

Lastly, in response to the public engagement process undertaken in May and June of this year, sections of this document have been revised. For easy reviewing, the updated information has been placed in shaded text boxes.

## 2 BACKGROUND

### 2.1 Regulatory and Funding Framework

The Ministry of the Environment (MOE) is the primary regulatory agency responsible for development of legislation that governs how waste will be collected and managed in Ontario. Please refer to Section 2.5 of Appendix A for a detailed listing of current Provincial policies, programs, and regulations.

Regulatory jurisdiction and financial responsibility over the types of waste generated within Ontario varies. Municipalities are able to access funding programs to help with the costs incurred from handling residential waste. Depending on the waste stream, municipalities can receive zero to 100% coverage of program costs. The Province expects that the IC&I sector will cover all costs associated with the handling and management of its waste. Therefore, no funding programs exist for municipalities to recoup costs incurred by the management of the IC&I waste stream.

In 2013, the MOE developed a Waste Reduction Framework for Ontario, consisting of:

- Proposed Waste Reduction Act (WRA)
- Proposed Waste Reduction Strategy (WRS)

The intent is for the WRA will replace the current *Waste Diversion Act*, making individual producers accountable for proper end-of-life management of their products. Producers will be responsible for meeting:

- waste reduction standards;
- service standards for consumer accessibility and convenience; and,
- promotion and education requirements.

Municipalities will be eligible for funding if they enter into agreements with producer(s) for the collection of any designated waste under the WRA. Potential reimbursement for costs associated with collection, handling, transporting, and storage of waste, as well as processing and disposal of designated waste has been written into the legislation. This is a positive step forward in the management of waste in Ontario and will greatly assist municipalities with programming costs associated with waste generated by both the residential and IC&I sectors.

The intent of the WRS is to provide a blue print for increasing waste diversion. The WRS outlines a vision of moving towards zero waste, and fostering economic and environmental innovation. The WRS will also set desired results, steps, and timeline for a smooth transition from existing diversion programs (see Figure 1).

Figure 1: Proposed WRS Program Transitional Timeline<sup>1</sup>

Action Item	Short Term (1-2 yrs.)	Medium Term (2-4 yrs.)	Long Term (4 yrs. & Beyond)
Blue Box	<ul style="list-style-type: none"> <li>Consult on funding model and roles and responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Continued consultation</li> <li>First steps to increase funding and responsibility; begin transition</li> </ul>	<ul style="list-style-type: none"> <li>Continue transition of program</li> </ul>
Transition other existing programs (i.e.: Electronics (WEEE), Tires, & Hazardous Waste (MHSW))	<ul style="list-style-type: none"> <li>Consult and complete transition of WEEE</li> <li>Begin transition of MHSW</li> </ul>	<ul style="list-style-type: none"> <li>Complete MHSW transition; begin transition of Used Tires</li> </ul>	<ul style="list-style-type: none"> <li>Complete transition of Used Tires</li> </ul>
Designate IC&I paper and packaging	<ul style="list-style-type: none"> <li>Consult on designating IC&amp;I paper &amp; packaging</li> <li>Begin review of 3Rs Regs</li> </ul>	<ul style="list-style-type: none"> <li>Designate a subset of IC&amp;I paper &amp; packaging under proposed Act</li> </ul>	<ul style="list-style-type: none"> <li>Continue phase-in of additional IC&amp;I paper &amp; packaging wastes</li> </ul>
Develop new standards for ELVs	<ul style="list-style-type: none"> <li>Consult on and implement new recycling standards</li> </ul>	<ul style="list-style-type: none"> <li>Continued implementation of standards and consult on additional measures</li> </ul>	<ul style="list-style-type: none"> <li>Continue to consult on additional measures</li> </ul>
Designate additional wastes	<ul style="list-style-type: none"> <li>Consult on additional wastes that could be designated</li> </ul>	<ul style="list-style-type: none"> <li>Designate new wastes, possibly carpets and <u>additional WEEE products</u></li> </ul>	<ul style="list-style-type: none"> <li>Continue to designate new wastes, possibly non-food organics and bulky items</li> </ul>
Disposal bans	<ul style="list-style-type: none"> <li>Consult on use of disposal bans, including eligible waste and timing</li> </ul>	<ul style="list-style-type: none"> <li>Ban WEEE from disposal once transition is complete</li> </ul>	<ul style="list-style-type: none"> <li>Ban MHSW from disposal once transition is complete</li> </ul>
Increase diversion of organics			<ul style="list-style-type: none"> <li>Consult on a strategy for organics diversion</li> </ul>

<sup>1</sup> Ministry of the Environment



Should the WRA and WRS receive approval then the potential impact on municipal waste management programs may include:

- possible increase in blue box funding (greater than 50%);
- increased administrative responsibilities pertaining to reporting and program management; and,
- changes to current programs, with future program scope and delivery dictated by the producer.

This Strategy will identify regulatory requirements, available funding, and associated jurisdiction for each waste stream evaluated throughout this document.

## 2.2 Waste Management: Collection in Oxford County

Waste management programs offered in the County of Oxford are not unlike services delivered in other Regions or Counties where the service delivery agent varies from program to program. In 2002, when the County assumed responsibility for waste management, County Council identified a need to harmonize the various programs offered within the County by implementing a standardized level of program delivery for full reimbursement of program costs by the County. This directive led to the development of individual municipal waste management agreements between the County and each of the eight area municipalities, detailing waste management program delivery as well as operational and financial responsibility.

Table 1 and Table 2 outline the various waste management programs offered to the residential sector, which the County finances along with the delivery agent responsible for the service.

**Table 1: Waste Management Curbside Service Delivery in the County of Oxford**

Services		Ingersoll	Tillsonburg	Blandford-Blenheim, East Zorra-Tavistock, Norwich, Zorra	South-West Oxford	Woodstock
Garbage*	Collection	County			South-West Oxford	Woodstock
	Disposal	County				
Blue Box*	Collection	County			South-West Oxford	Woodstock
	Processing	County			Woodstock	
Leaf & Yard Waste*	Collection	Municipal Depots				
	Processing	County				
Large Article Collection	Collection	Ingersoll	Tillsonburg	County		Woodstock
	Processing	County				

Source: GENIVAR Report Appendix A

\*These programs are open to the industrial, commercial, and institutional sector as long as program requirements are met.

Table 2: Waste Management Diversion Programs in the County of Oxford

Service	At County Landfill	At Special Events
Household Hazardous Waste	✓	✓
White Goods & Scrap Metal	✓	✓
Cardboard	✓	✓
Electronics Waste	✓	✓
Tires	✓	✓
Bale Wrap	✓	
Construction and Demolition Waste	✓	

Source: GENIVAR Report Appendix A

Any waste management service offered outside of those listed in Tables 1 and 2 is done so at the sole responsibility of the individual municipality and financed by that municipality.

Each year the County must report on behalf of all eight municipalities, the results of the above noted collection programs include collected tonnage and program costs. This information is submitted to WDO for analysis so that program funding can be calculated and dispersed to Ontario municipalities.

Data for the last four reporting years (2010-2013) is shown below in Table 3.

Table 3 Residential Waste Generated, Diverted and Disposed in Oxford County

The data contained in Tables 3 has been revised based on updated household counts made available since the release of the Draft Waste Management Strategy.

	Total Residential Waste Generated		Total Residential Waste Diverted		Total Residential Waste Disposed		Residential Recyclables Diverted	Total Residential Diversion Rate	Total Residential Disposal Rate
	Tonnes	Kg/ Capita	Tonnes	Kg/ Capita	Tonnes	Kg/ Capita	%	%	%
2013	39,245	371	23,525	223	15,720	149	Data not yet verified by WDO		
2012	46,938	444	27,269	258	19,669	186	32.5%	58.1%	41.9%
2011	42,570	403	22,952	217	19,617	186	28.1%	53.9%	46.1%
2010	39,131	381	21,165	206	17,967	175	27.1%	54.1%	45.9%

Source: Waste Diversion Ontario

Total Residential Waste Generated - represents all of the garbage and recyclable materials generated by the residential sector in the County. Materials collected at the curb, special events and at the County's transfer station located at the Waste Management Facility are included in this calculation.

Total Residential Waste Diverted - represents all of the recyclable materials (i.e.: blue box materials, leaf and yard waste, electronics, etc.) generated by the residential sector that has been diverted from landfill.

Total Residential Waste Disposed – represents all of the garbage waste generated by the residential sector that was landfilled.

The total waste generated has increased each year since 2010; this is due to more accurate reporting by the County. Observations taken from Table 3 are that the amount of residential recyclables which are blue box materials and other recycling like construction and demolition material, electronics, tires, etc. has increased by 5% since 2010. Equally as notable, is that the County’s residential diversion rate has increased by 4%. While these numbers are encouraging, efforts to improve program performance should continue as there is still material that can be diverted from the landfill.

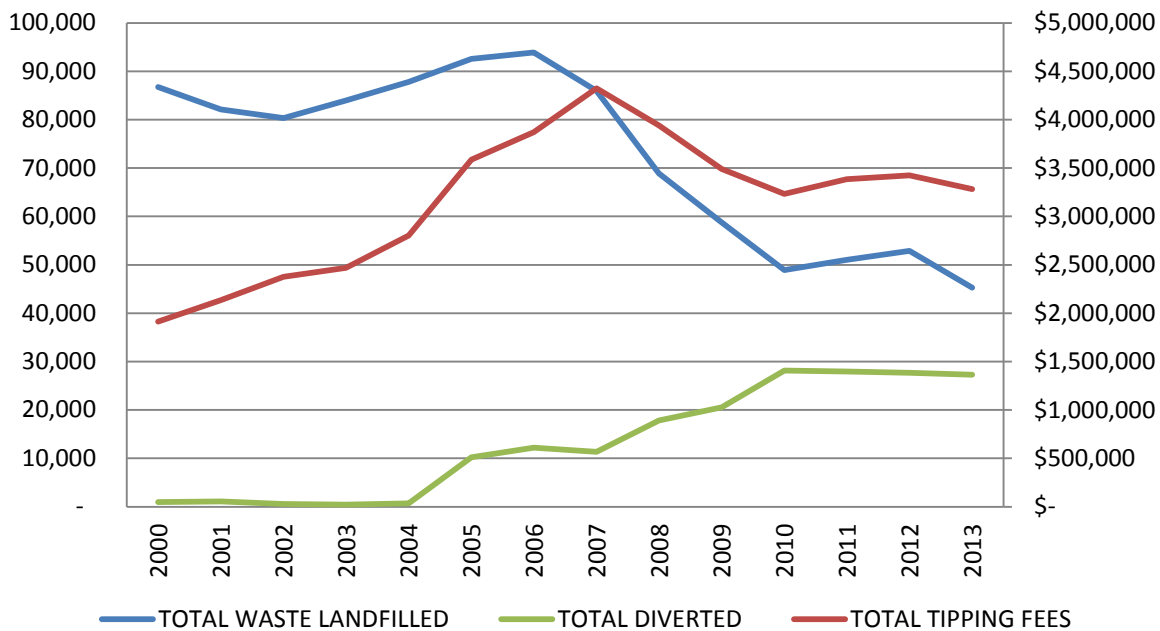
### 2.3 Waste Management: Disposal in Oxford County

The County of Oxford opened a Non-Hazardous Solid Waste Landfill Site in Salford in 1986. At the time that the landfill site was opened, the projected closure date of the site was anticipated to be 2014. Today, it is estimated that there is an additional 30 years left in the landfill site.

Figure 2 below illustrates how the process of disposing of material has decreased significantly since 2006. Factors contributing to this decrease in garbage tonnage include:

- annual tipping fee increases;
- the economic down turn in 2008, resulting in the closing/relocation of several large manufacturing facilities; and,
- increased waste diversion activities at the landfill site.

**Figure 2: Waste Material Tonnage Handled by Oxford County Programs**



**Note: Recording of curbside collected blue box materials and special event tonnages began in 2005**

Starting in 2002, the County implemented a full user pay system. While some of the area municipalities had established bag tag programs in place, implementation of the bag tag program across all eight municipalities resulted in an immediate decrease in the amount of waste going to the landfill. In 2005, the County opened the Compost Facility and began diverting brush, leaf, and yard waste from the landfill. Following this was the removal of biosolids in 2008, the opening of the Household Hazardous Waste Depot in 2009, and the Construction and Demolition and Electronics Depots in 2011.

The landscape of the County's landfill site has matured and has become so diverse that it can no longer be called a landfill site, but rather a waste management facility. For example, in 2004 the County's landfill site received 32,000 vehicles, landfilled 95,000 tonnes of waste, and diverted 700 tonnes of leaf and yard waste. In 2013, activity at the facility changed, receiving 33,000 vehicles, landfilling 45,000 tonnes of waste, and recycling 17,000 tonnes of material.

Today onsite diversion activities include recycling depots for the following material types:

- brush, leaf and yard waste;
- blue box and cardboard;
- scrap metal;
- construction and demolition waste;
- household hazardous waste;
- agricultural bale wrap;
- tires;
- electronics; and,
- freon containing items.



Over the next five to ten years, the County's facility will most likely see tipping fee revenues and landfilling tonnages continue to fall as customers become more aware of the non-revenue producing recycling operations at the facility. In addition, as tipping fees increase, customers will continue to take waste material to other, out of County landfill sites offering lower tipping fees.

The efficiency of current operations was examined in 2013. This exercise resulted in a reduction in operational hours at the facility, which began in January 2014 as a cost saving measure. In 2014, the County will review equipment requirements to determine if smaller, less costly equipment can be used in conjunction with the corresponding reduction in landfill tonnages. As well, if approved by County Council, fleet used at the facility will be managed out of the Public Work's Fleet budget instead of pulling from landfill reserves. Current fleet operations are paid through the landfill budget and do not include a replacement/depreciation cost. As a result, when new fleet is acquired, it is funded from the landfill reserve, which does not reflect true lifecycle costing. This new initiative would provide for better management of the landfill site reserves.



Operationally, the tipping fees generated at the facility are now responsible for covering wages and costs to operate the non-revenue producing recycling operations at the landfill site. If landfill tonnages continue to fall, other sources of revenue will need to be investigated to support the recycling operations at the facility; otherwise, a reduction in the services provided may have to be considered. Additionally, as alternative disposal methods for waste are presented to the County they should be evaluated on a case-by-case basis by staff to determine if the proposal is viable to the County.

## 2.4 Waste Management Budget Projections

The Waste Management budget projections for the County are shown below in Table 4. Projections for 2014 represent current contract pricing and anticipated revenue. Bag tag pricing in 2014 accounts for the tag price increase as of July 1, 2014.

Future budget projections take into consideration new contract pricing, equipment purchases, as well as standard day-to-day operational expenses. The County anticipates that WDO Funding will continue to increase for the County given recent program changes.

Table 4: Oxford County Waste Management Operating Budget

	Budget	Projections			
	2014	2015	2016	2017	2018
<b>Operating Expenses<sup>1</sup></b>	9,741,391	9,856,698	10,018,602	10,112,974	10,253,770
<b>Revenues:</b>					
<b>WDO/Waste Diversion Funding</b>	(742,000)	(793,925)	(745,976)	(752,953)	(755,057)
<b>Sale of Recycling Materials<sup>2</sup></b>	(828,700)	(839,283)	(851,467)	(863,951)	(876,437)
<b>Bag Tag Revenue<sup>3</sup></b>	(2,431,000)	(3,088,000)	(3,168,000)	(3,248,000)	(3,328,000)
<b>Tipping Fees</b>	(3,100,000)	(3,100,000)	(3,100,000)	(3,100,000)	(3,100,000)
<b>Levy Requirement<sup>4</sup></b>	(2,639,691)	(2,035,490)	(2,153,159)	(2,148,070)	(2,194,276)
<b>Levy Increase / (Decrease)</b>	40,588	(604,201)	117,669	(5,089)	46,206
<b>% Increase / (Decrease) over prior year</b>	1.48%	-22.89%	5.78%	-0.24%	2.15%

<sup>1</sup> Operating Expenses: net of reserve transfers, excludes capital, includes landfill, curbside collection, and waste diversion expenses

<sup>2</sup> Sale of Recycling Materials includes other misc. revenues such as container sales

<sup>3</sup> Bag Tag Revenues includes forecast price per tag increases

<sup>4</sup> Levy Requirement shown as revenue

Table 5 identifies the portion of the levy which comes from the IC&I sector. Note that projections for 2015 – 2018 are estimates based on the average of the previous five-year actuals and is calculated by applying the waste management levy across all properties.

**Table 5: Levy Requirement from the IC&I Sector**

The information below represents the IC&I levy for waste which is based on the tax ratios and the percent assigned to the IC&I sector.

	Budget	Projections			
	2014	2015	2016	2017	2018
<b>Levy Requirement<sup>1</sup></b>	\$ 2,639,691	\$ 1,955,490	\$ 2,073,159	\$ 2,068,070	\$ 2,114,276
<b>IC&amp;I %<sup>2</sup></b>	27.74%	27.74%	27.74%	27.74%	27.74%
<b>IC&amp;I Levy<sup>3</sup></b>	\$ 732,356	\$ 542,531	\$ 575,177	\$ 573,765	\$ 586,585

<sup>1</sup> Waste Management net Tax Levy requirement

<sup>2</sup> Industrial / Commercial /Institutional County Levy percentage, 2014 to 2018 based on average of previous 5 years actuals

<sup>3</sup> Industrial / Commercial /Institutional proportional waste management Levy

## 2.5 GENIVAR Report

In December 2011, Oxford County retained the services of GENIVAR Inc. to develop an Integrated Waste Management Plan (IWMP). The County requested a review of the current and future needs of the waste management system, possible diversion strategies, and alternative systems for consideration over the next 20 years.

After a year of research and public consultation, GENIVAR presented the County with a list of eight program options for direct implementation. The estimated diversion impact of these program options is 5,260 tonnes, at an estimated cost per household of \$31.78/year. GENIVAR predicts that if all options were successfully implemented the County’s residential diversion rate would be increased from 54% to 67%.

Table 6: GENIVAR – Integrated Waste Management Plan Program Options for Direct Implementation summarizes the eight recommended program options for direct implementation. See Appendix A for program details and additional findings.

**Table 6: GENIVAR – Integrated Waste Management Plan Program Options for Direct Implementation<sup>2</sup>**

Options	Findings	Suggestion	Budget Implication
<b>Promotion &amp; Education</b>	County has a successful program in place reaching residents, schools, community groups, multi-residential and businesses	Expand program to encourage behavioural changes	\$270,000/year
<b>Revised Bag Tag Program</b>	Bag tag revenue is lower than it should be based on garbage generated	Increase curbside enforcement; Increase bag tag fee; Implement a large article fee	\$105,000/year
<b>Mandatory Recycling By-Law</b>	Enactment of a mandatory recycling by-law can increase recycling participation rates as high as 10%	Implement a mandatory recycling by-law	\$196,000/year

<sup>2</sup> GENIVAR Report Integrated Waste Management Plan

Options	Findings	Suggestion	Budget Implication
<b>Free Blue Boxes</b>	Provincial studies show that providing an additional blue box will increase the recycling capture rate by an average of 9%	Provide one free blue box to residents	\$500,000 (one time)
<b>Community Recycling Centre (CRC)</b>	Communities who implement a CRC see an overall diversion impact of 1%	Operate a new CRC facility in addition to the CRC facility located at the landfill site and the four annual special waste collection events	\$500,000/year (based on capital amortized over 20 years)
<b>Promote Backyard Composting</b>	Reach out and engage approximately 29% of the population	Purchase 2500 composters and sell to residents at \$10/unit	\$110,000 (one time)
<b>School Recycling Program</b>	Expand current program to include curriculum development consistent with curbside collection program	Implement an enhanced school program to achieve an additional 6 kg per capita of blue box materials	\$35,000/year
<b>Retail Take Back &amp; Special Events</b>	Recyclable yield is low but provides opportunity to provide information, receive feedback and create community awareness	Implement a retailers take back program where retailers assume responsibility, including cost for properly recycling/disposing of items they sell	\$77,000/year

## 2.6 Public Engagement

Public engagement is an important part of doing business in the County of Oxford and is one of six strategic directions outlined in the County’s Strategic Plan. Under the plan, the County is committed to:

- *better harness the power of the community through conversation and dialogue.*
- *better inform the public about County programs, services, and activities through planned communication.*

Public engagement for this Waste Management Strategy consisted of:

### Electronic Survey – February 2012

GENIVAR administered an electronic survey in February 2012 as part of the IWMP report. The purpose of the survey was to measure public attitudes and perceptions regarding current and future waste management collection programs offered within the County.

The response rate for this survey was excellent, receiving 729 responses, representing 1.5% of the population. Equally notable was that respondents represented all eight municipalities with a proportionate distribution based on households. While the statistical validity of the survey cannot be confirmed, subsequent surveys identified that the findings in this survey did represent public views. Survey findings are discussed throughout this document with a complete summary of findings found in GENIVAR’s report located in Appendix A.

### Steering Committee Meetings – March and June 2012

A Steering Committee was established to assist and guide GENIVAR in the development of the IWMP. The committee represented a cross-section of interests in the County and consisted of:

- Warden;
- Two County Councillors;
- Six Municipal Staff Representatives from Customer Service and Operations;
- One Agricultural Representative;
- One Commercial Representative;
- One Industrial Representative; and,
- Two County Staff Representatives from Public Works, Waste Management Division.

The committee met twice in 2012. The first meeting obtained feedback on attitudes, perceptions, and priorities on current and future programming needs. The second meeting evaluated GENIVAR's preliminary findings and recommendations for the Plan. Each finding and recommendation was evaluated by the committee and scored, according to need, cost, ease of implementation, etc. The outcome of this meeting provided GENIVAR with a framework with which to begin drafting the Plan for Council approval.

The County plans to meet with the Steering Committee in the fall of 2014 to review the approved system improvement options and obtain input on the implementation of these options.

#### Telephone Survey – August 2013

The County retained EKOS Research Associates to perform a telephone survey of residents, gaging their attitudes towards waste, recycling and their preferred method of communication with the County. The methodology for this study involved a survey of 400 residents, 18 years of age and older, with representation across the County. A sample of this size provides a margin of error of +/- 4.9 percentage points, 19 times out of 20.<sup>3</sup> See Appendix B for survey findings.

Survey findings revealed that residents are satisfied with the quality and scope of the waste management services they receive. Residents appear to be very aware of the basic elements of their garbage and recycling systems, utilize the County Waste Management Calendar and landfill services, and in general see the current system as equitable. Residents indicated that they are reluctant to pay any more for the system than they already do.

#### Let's Talk Public Works On-line Campaign – September 2013

During September 2013, Oxford County Public Works Department launched its Let's Talk Public Works On-line Campaign. Residents were directed to the County's website where they could view GENIVAR's IWMP, with the option to submit comments. The campaign received 746 visitors with 18 comments (see Appendix C) pertaining to Waste Management. Comments received covered source separated curbside collection, bag tags, and weekly recycling.

<sup>3</sup> EKOS Research Associates Inc. Final Report, September 2013

Let's Talk Trash On-line Campaign – May – June 2014

Throughout May and June of 2014, Oxford County Public Works Department launched its Let's Talk Trash On-line Campaign. Residents were able to view the County's Draft Waste Management Strategy presented to County Council in May 2014. Through this process, residents were able to submit comments on the Draft Strategy. The County received 18 comments, found in Appendix E.

Additionally, the County produced a short on-line survey through the Let's Talk Trash Campaign, asking residents to weigh in on the following issues:

- Level of satisfaction with the current recycling collection schedule.
- Willingness to move to a six-day collection cycle if it reduces program costs.
- Whether or not receiving an additional blue box would promote further recycling and willingness to pay an increase to receive a new blue box.
- Perception of value of the large article collection program.
- Perception of value for re-launched backyard composting program.

The County received 266 survey responses, representing 0.6% of households in the County. Municipal representation was proportionate to the household count distribution across the County with the exception of the Township of Blandford-Blenheim having higher than expected levels of participation and the Township of Norwich having lower than expected levels of participation. Appendix F contains the detailed survey results.

Facilitated Councillor Workshops – April and September 2013

In April and September of 2013, the Public Works Department hosted two facilitated Councillor Workshops held immediately after Council. Members of the public and press were welcome to attend, however, no one outside of Council or County staff attended the sessions. The purpose of the sessions was to review GENIVAR's IWMP developed for the County, and to discuss recommendations arising from the report. Workshop summaries were presented to County Council in Reports PW 2013-39 and PW 2013-62 found in Appendix D.

Facilitated Councillor Workshop – June 2014

In June of 2014, the Public Works Department hosted a third facilitated Councillor Workshop. The purpose of this was to review the Draft Waste Management Strategy and the proposed system improvement options and to obtain Council insight.

Public Meeting and Webinar – June 2014

On June 18, 2014, Oxford County Public Works Department held a public meeting in Council Chambers. Members of the public were welcomed to attend in person or online through the County's first webinar. The session consisted of a presentation of the proposed system improvement options followed by a question and answer period. Ten Oxford County residents attended online and 17 residents attended in person. The meeting was also broadcasted by Rogers TV and is available online for public viewing. Appendix G contains the presentation given to the public.

## 2.7 Population and Household Forecasts to 2041

According to a recent study completed for the County on its population and household projections for the next 25 years, the County's population base will become increasingly more dominated by an older population, with a projected population of 125,700 in 2041<sup>4</sup>. Due to a predominantly older population, it is anticipated that the number of occupants per dwelling will decrease from 2.6 in 2011 to 2.38 in 2041 as represented in Table 7. Based on this data the County will need to plan for increased material tonnages as a direct result of the increased number of households, but also adjust tonnage projections to reflect the lower person per unit data.

Table 7: Oxford County Population and Household Forecast, 2001-2041

Year	Population (Excluding Net Census Undercount)	Population (Including Net Census Undercount)	Households	Person Per Unit
2001	99,300	103,200	37,300	2.77
2006	102,800	106,500	39,300	2.71
2011	105,700	108,200	41,600	2.60
2016	109,200	111,700	44,000	2.54
2021	112,800	115,500	46,400	2.49
2026	116,100	118,800	48,500	2.45
2031	119,100	121,900	50,400	2.42
2036	121,300	124,200	51,800	2.40
2041	122,800	125,700	52,900	2.38

Source: Watson & Associates Economists Ltd. 2013

In Oxford County the most predominant type of household is single and semi-detached, comprising of about 80% of all housing types. This trend will continue through to 2041 as shown in Table 8. The County should focus their waste management initiatives around these housing types as they are the majority of the households; however programs should still be in place for the multiple dwelling and apartment residences.

<sup>4</sup> Watson & Associates Economists Ltd. – Oxford County Growth Forecast and Employment Land Study Draft



**Table 8: Oxford County Housing Growth Forecast Summary, 2001-2041**

Year	Singles & Semi-Detached	Multiple Dwellings	Apartments	Other	Total Households
Mid 2001	29,320	2,650	4,800	495	37,265
Mid 2006	30,890	2,950	5,040	450	39,330
Mid 2011	32,450	3,150	5,460	495	41,555
Mid 2016	34,080	3,420	5,980	495	43,975
Mid 2021	35,840	3,740	6,340	495	46,415
Mid 2026	37,350	4,030	6,640	495	48,515
Mid 2031	38,700	4,310	6,910	495	50,415
Mid 2036	39,720	4,520	7,110	495	51,845
Mid 2041	40,480	4,680	7,270	495	52,925

Source: Watson & Associates Economists Ltd. 2013

The distribution of housing throughout Oxford County as seen in Table 9 is projected to remain essentially the same between 2011 and 2041. The City of Woodstock will have the bulk of housing (40%) followed by Tillsonburg (16%) and Ingersoll (11%). The rest of the housing share is distributed fairly evenly among the five rural townships. Although the majority of the housing is in the urban areas, more than 30% will continue to remain in the rural areas.

**Table 9: Oxford County Percentage Share of Housing Growth by Area Municipality, 2001-2041**

Municipality	Percent of 2011 County Housing	Percent of 2041 County Housing
City of Woodstock	37.8%	40.9%
Town of Ingersoll	11.5%	11.3%
Town of Tillsonburg	16.4%	16.0%
Township of Blandford-Blenheim	6.3%	6.1%
Township of East Zorra-Tavistock	6.0%	5.7%
Township of Norwich	8.7%	8.2%
Township of South-West Oxford	6.2%	5.4%
Township of Zorra	7.1%	6.3%
Oxford County	100%	100%

Source: Watson & Associates Economists Ltd. 2013

Residential waste generation numbers in Table 10 are proportional to the population data in Table 9, suggesting that households in the urban areas are generating the same amount of waste as the rural households. The bulk of the waste generated within Oxford County is coming from the three urban centers. It can be assumed that multiple family residences (MF) are in the urban areas, and this is confirmed by Watson & Associates Economists Ltd. – Oxford County

Growth Forecast and Employment Land Study Draft Report which indicates that less than 10% of MF are from the Townships.

Waste generation rates in Table 10 were calculated using the 2011, 2021, and 2041 population data from the Watson Report. The urban rates were calculated using Woodstock, Ingersoll, and Tillsonburg single and semi-detached households from the Watson Report and the London Urban waste generation rate of 777.9 kg/hhld/yr., found in Appendix A. The rural rates were calculated using the Township single and semi-detached households from the Watson Report and the Simcoe County mostly rural waste generation rate of 616.7 kg/hhld/yr., found in Appendix A. Finally, the MF rates were calculated using multiple and apartment household numbers from the entire county in the Watson Report and a mix of both urban and rural generation rates were used.

**Table 10: Oxford County Waste Generation Rates (Metric Tonnes/Year), 2011, 2021, and 2041**

	Oxford County		
	2011	2021	2041
Urban	14,154	16,966	19,525
Rural	8,806	8,958	9,787
MF	6,349	7,719	9,132
<b>Total</b>	<b>29,309</b>	<b>33,643</b>	<b>38,444</b>

### 3 RESIDENTIAL CURBSIDE COLLECTION PROGRAMS

Under the *Municipal Act*, municipalities are responsible for providing garbage collection/disposal services. The County's curbside collection system consists of the bag tag program, curbside garbage, and large article collection, curbside recycling collection, and processing of collected curbside recyclables.

#### 3.1 Oxford County Waste Management Audit Data

In 2011, the County performed both a curbside waste and recycling audit. While the statistical validity of the audits cannot be confirmed, the results of the study did provide valuable information as to the contents of garbage bags and blue boxes, as well as, where program improvement opportunities are required (see Section 3.2 of Appendix A for statistically valid provincial waste audit data).



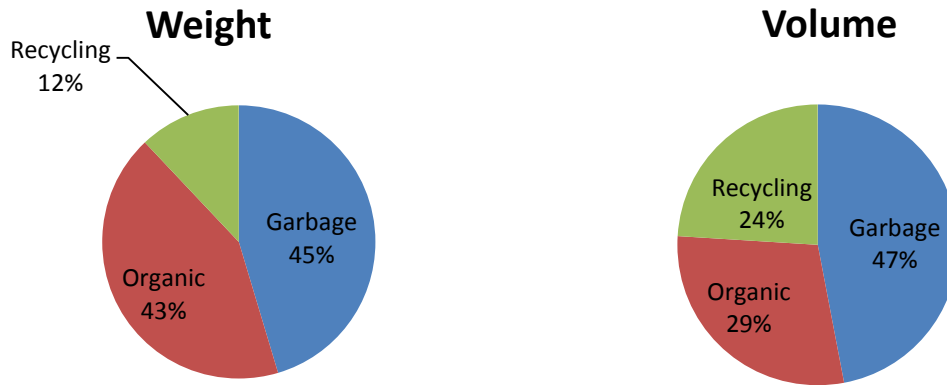
##### 3.1.1 Waste Audit

The County's study selected and sorted ten locations for each collection day of the week from random locations throughout the different areas of Oxford County. The same locations were audited each week.

Each day garbage set outs were sorted into individual material categories and a visual estimation as well as a physical weight of the individual contents was obtained. Variables taken into account for this study included, recycling and non-recycling weeks, rural and urban locations, as well as the municipality and location of the bags collected.

A total of 1,080 kg of garbage was sorted during the two-week period. See Figure 3 for audit results. Garbage material accounted for approximately 45% of the weight and 47% of the volume in the bags. The organic materials accounted for 43% of the weight, but only 29% of the volume due to the density of the material. Blue box recyclable materials accounted for 12% of the weight and 24% of the volume.

Figure 3: Curbside Waste Audit Results, 2011



The separation of rural and urban weights identified trends between these two areas. The weight differences can be seen in Table 11. The recyclable content lost in the waste stream is approximately the same in both areas with differing organic and garbage levels. The rural area garbage set outs average lower levels of organic materials. This was an expected result with composting space being more readily available in the rural areas.

Table 11: Residential Garbage Set Outs Over a Two Week Period

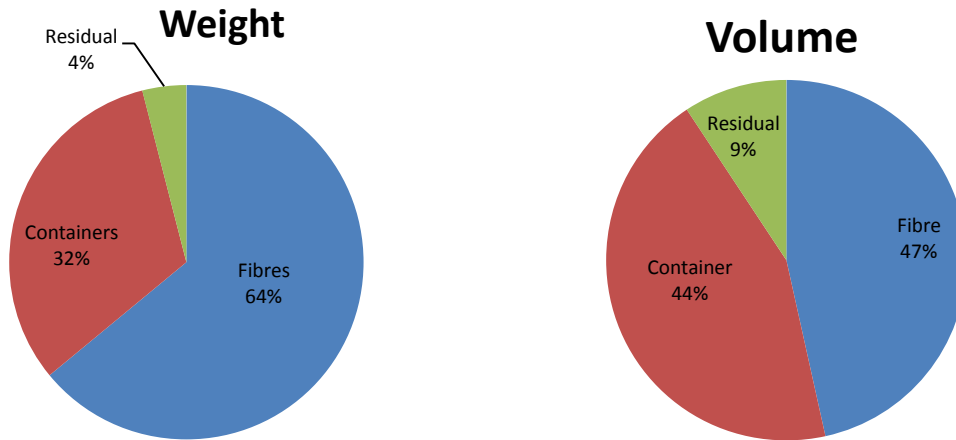
	Urban	%	Rural	%
Total Audited KG	687		383	
Total Garbage KG	267	39%	193	50%
Total Organic KG	330	48%	130	34%
Total Container KG	40	6%	30	8%
Total Fibre KG	50	7%	30	8%

### 3.1.2 Recycling Audit

The goal of the recycling audit was to determine the volumes and weights of fibres, containers, and any unacceptable materials, referred to as residual waste. A total of 100 set outs were evaluated having a net weight of 1,000 kg and filled 43 – 360 litre recycling totes. This material was sorted into three different categories: fibres, containers, and residual waste. The material was then measured by volume and by weight.

Figure 4 shows the cumulative results of the audit.

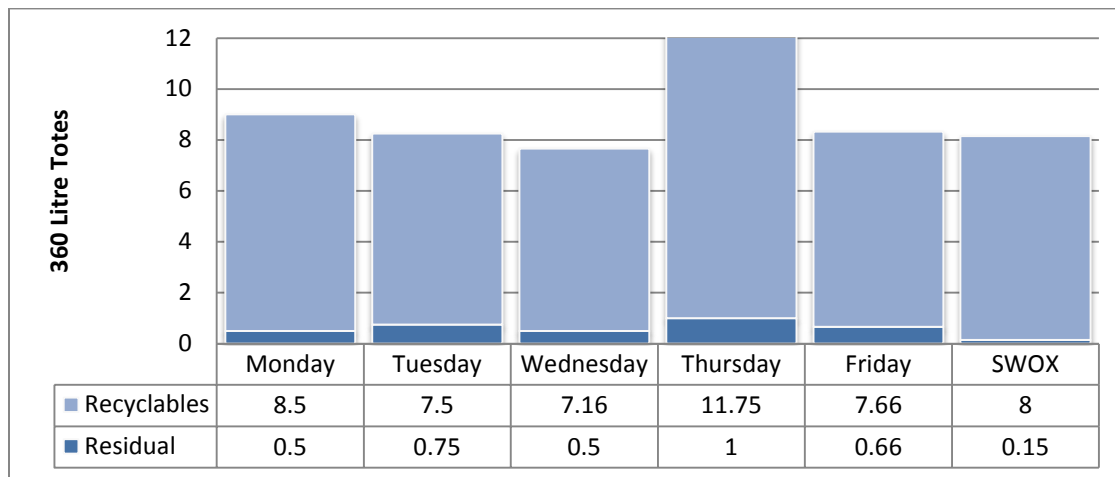
Figure 4: Curbside Recycling Audit Results, 2011



The residual waste percent is based on the volume levels taken from measuring all materials placed in the 360 litre recycling totes. The differences between the weight and volume of the recyclable materials are important to note when examining the content of the residual waste later in this report. With the main contamination content being plastic bags, it raises residual volumes but not weight. The weekly average of residual waste based on a volume level was approximately 8% and 4% if calculated by weight.

The day to day comparisons of collected material volumes to the audited total residual waste volumes can be seen in Figure 5. By separating the data by collection day we can determine a geographic representation of recyclables and residual waste volume comparisons.

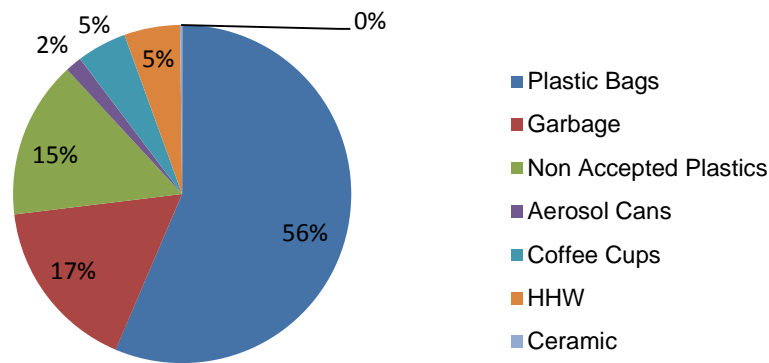
Figure 5: 2011 Curbside Recycling Audit Data, Collection Day Volume Comparison



The largest volumes audited were found on Thursday. The highest level of residual waste was also found on Thursday collection, followed by Tuesday collection, which had the highest percentage of residual waste. The Township of South West Oxford has the lowest levels of residual waste of any of the collection days, which is likely attributed to the acceptance of plastic bags in their program.

The residual waste for Monday to Friday collection was sorted into different categories to determine trends in the type of materials that are being placed into recycle bins, see Figure 6. Approximately 71% of the residual waste found in the audit was from plastic bags and non-accepted plastics. Plastic bags include all types of plastic bags, grocery, bread, wraps, and any other than unaccepted plastics. The category non-accepted plastics includes any plastic items that are not taken in the current program. These plastics include any unnumbered containers, toys, tools, etc. Garbage includes any materials that are well known and unmistakably to be garbage. The following chart shows the breakdown of residual waste found in the blue boxes.

Figure 6: Blue Box Recycling Residual Waste Audit Results



### 3.2 Bag Tag Program

The bag tag program is comprised of i) bag tag purchase, storage, and distribution, ii) bag tag vendors, iii) program compliance and enforcement, and iv) bag tag pricing. This section will discuss the public engagement process, the current bag tag system and recommended system improvement opportunities.

#### 3.2.1 Public Engagement Responses

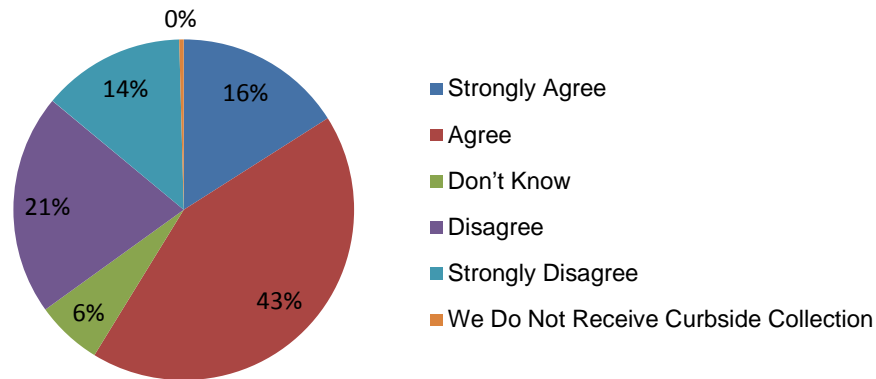
The online survey conducted by GENIVAR in 2012 (Figure 7), asked residents if they believed the bag tag system encourages residents to reduce, re-use, and recycle. Respondents indicated that:

- 59% agreed or strongly agreed with this statement
- 35% disagreed or strongly disagreed with this statement

The remaining respondents either did not comment or indicated that they did not receive curbside garbage collection.



Figure 7: Survey Response – The Bag Tag System Encourages Residents to Reduce, Re-Use, and Recycle



Source: GENIVAR Report Appendix A

During the August 2013 telephone survey, the County asked residents to provide comments on the bag tag system (see Appendix B for survey results). The results of this survey are statistically valid and some of the findings include:

- 7 out of 10 residents think the bag tag model is a fairer system;
- 94% of respondents indicated they are aware of the bag tag program but only 74% were aware of the program guidelines;
- 30% of the respondents thought a tag increase of 50 cents was appropriate; and,
- There is higher support for accepting additional costs among younger residents (35 and younger) than older residents.

Overall, the respondents indicated that the bag tag system seemed to be a more equitable system, but the general population is largely unwilling to pay more for the system.

Through the Let's Talk Public Works campaign, comments on the bag tag program consisted of:

- the program represents municipal double dipping;
- the program should be disbanded and full cost of garbage collection should be placed on the levy; and,
- the bag tag program is a hardship for individuals on a fixed income.

In summary, the three surveys identified that while residents generally agree with the underlying principals behind the use of bag tags, they are not in favour of increasing the cost of bag tags.

### 3.2.2 Bag Tag Purchase, Storage and Distribution

The County of Oxford purchases 2,000,000 bag tags annually through a competitive tendering process. Pricing is based on quantity ordered, shipments of tags and storage of stock. The printer is required to stock the surplus tags for up to twelve months and ship stock to the County eight times a year.

The County spends on average \$19,000 per year to purchase 2,000,000 bag tags. These tags are sold to Bag Tag Vendors at 3% off the retail price of the tag. The Vendor orders bag tags through the County's Customer Service Department where a minimum order of 500 tags is required. The tags are couriered to the Vendor using next day service with courier costs ranging between \$3,300 to \$3,500 per year. Revenue received from the sale of bag tags ranges between \$2 to \$2.4 million per year.

The County examined potential cost efficiencies in the purchase, storage, and distribution of bag tags. One option considered increasing the number of tags purchased during the tendering process and utilization of a secured storage space on County property. Discussions with the County's current provider of bag tags identified that one shipment of 4,000,000 tags would save the County approximately \$1,800. The savings under this option is marginal given that storage space at the County is at a premium. As well, storage of the bag tags at a fireproof and secured location outside of the County is a preferred option given the monetary value of the stock.

Another option considered was to purchase 4,000,000 tags with storage and shipment by the printer. Increasing the quantity of tags to be purchased does provide a lower unit cost per tag; however, storage space at the printers is limited making it a non-viable option.

The County also examined opportunities to reduce courier costs by increasing the minimum tag order from 500 to 1000. This option was not deemed favourable, as many of the smaller Bag Tag Vendors have indicated that it is a financial hardship to order more than 500 tags at a time. As well, discussions with Customer Service staff identified that tag orders in quantities of 500 are very efficient for them to process.

Based on the above analysis it was concluded that the current system in place for ordering, storage, and distribution of bag tags is efficient and cost effective.

### 3.2.3 Bag Tag Vendors

Retail outlets across the County are encouraged to participate in the Bag Tag Vendor Program. While Vendors only receive a 3% reduction in the purchase price of the tags, selling County bag tags draws additional retail business to the vendors.

The number of active Bag Tag Vendors ranges from 95 to 100 vendors at any one time. A change in vendors occurs because of business closures or change in business ownership. While the largest grouping of vendors is located in the City of Woodstock and Towns of Ingersoll and Tillsonburg, vendor representation occurs in most of the villages and hamlets within the County.

The application process to become a Bag Tag Vendor is relatively simple with the approval process taking a couple of days. Interested Vendors are required to apply to the County to become a Bag Tag Vendor. Upon acceptance of their request, Vendors receive a Bag Tag Vendor



Agreement, which outlines payment options and program guidelines including:

- No tax on bag tags;
- No restriction on the amount of bag tags that can be purchased from a Vendor;
- For Debit/Credit sales, store policy regarding minimum sales applies; and,
- Vendor privileges revoked if any vendor is found not abiding by the guidelines set out by the County.

Routine monitoring of the Bag Tag Vendor Policy is performed to ensure program compliance by Vendors. The County monitors the Vendor performance by conducting secret shops throughout the year. However, even with this monitoring program, customer service complaints were received by the County. Some of the common complaints received are:

- the purchase of single bag tags is not allowed; residents are required to purchase bag tags in multiples of five or more only; and,
- Vendors charging more than the current bag tag price.

Upon the receipt of a complaint, the County will send a staff member to perform a secret shop of that Vendor. In most cases in the past, the Vendor in question had followed the program guidelines at the time of the secret shop. Where the Vendor has shown non-compliance with program, the staff member will identify himself or herself, review program guidelines with the store clerk, and request to speak with the store manager. In addition, a follow-up letter is sent to the business owner alerting them to the non-compliance and the potential to be withdrawn from the program for subsequent incidences.

### 3.2.4 Bag Tag Compliance and Enforcement

Bag tag program compliance and enforcement is an ongoing issue for the County. Routine curbside audits conducted by the County identify program compliance issues pertaining to garbage setouts having:

- no bag tags;
- insufficient number of tags;
- money taped to the bag instead of a County issued bag tag;
- counterfeit bag tags;
- partial bag tags; and,
- tags attached to the container instead of the bag.

In 2010, the County conducted a curbside bag tag audit to assess program compliance. A thousand homes with setouts were assessed over a two-week period. Audits were conducted in each municipality. The results determined that:



- 5% of the homes assessed had non-compliant setouts; and,
- of the 5% non-compliant setouts, 2.7% did not have bag tags, and 2.2% were oversized setouts.

Based on this audit, the County forecasts that between \$100,000 and \$120,000 is lost in bag tag revenue each year from program non-compliance and fewer set outs on non-recycling weeks. Please note that the County cannot confirm the statistical validity of these results.

The County's audit findings are supported by the telephone survey conducted in August 2013 (Appendix B). Survey respondents identified that while 94% of the respondents were aware of the bag tag program, only 74% of the respondents were aware of the program guidelines.

Under the County's Current Fees and Charges By-law 4889-2007:

- One bag tag is required for each garbage bag (up to 76 x 96 cm) or each rigid container (up to 128 litres). Each such bag or container must weigh less than 20 kg;
- Two bag tags shall be used for each rigid container with a volume between 129 and 240 litres, weighing less than 20 kg; and,
- Three bag tags shall be used for each rigid container with a volume between 241 and 360 litres.

In addition to the County's Current Fees and Charges By-law, the County publishes tagging requirements on the County website and each year in the annual Waste Management Calendar. Program requirements include:

- placing bag tags on the top half of the garbage bag or folded around the neck of the garbage bag so that both ends of the tag are visible;
- broken or ripped tags will not be accepted; and,
- when using a reusable container, place the appropriate number of tags on the top bag inside the container; do not tag individual bags inside the container or the container itself.

Enforcement of the County bag tag by-law and program requirements has largely been left up to the organization responsible for curbside collection. In the City of Woodstock and Township of South-West Oxford, collection is performed by municipal forces while the remaining municipalities in the County have collection performed by a private contractor. Audit results showed deficiencies in all three collection programs.

To address the issue of bag tag program compliance, a portion of the newly created position in Waste Management will be dedicated to curbside enforcement of County programs. Curbside enforcement will include one on one training on program requirements with residents, notification tags left on set outs, and follow-up and training with curbside collectors on program requirements.

### 3.2.5 Bag Tag Pricing

In 2012, staff conducted an informal survey of municipalities contained within the County’s WDO Municipal Grouping as well as the City of Stratford and County of Simcoe (see Table 12). Findings showed that while user pay program implementation varied among municipalities (full and partial), bag tag pricing ranged from \$1 for small kitchen catcher bags to \$3 for surplus bags.

**Table 12: Municipal Bag Tag Pricing Comparison**

Municipality	Bag Tag Price
County of Wellington	\$1.00 for small bag; \$1.75 for large bag
Oxford County	\$1.50/bag
City of Kingston	\$2.00/bag
Kawartha Lakes	2 free bags/week, then \$2.00 for each additional bag
Blue Water Recycling Association	\$2.50/bag - varies depending on municipality
City of Stratford	\$2.40/bag
County of Simcoe	\$2.00 for first bag; \$3.00 for subsequent bags

The implementation of user pay/bag tags is considered a Best Practice under WDO. The results of Table 12 are representative of the majority of municipal user pay programs across Ontario where bag prices are typically \$2.00/tag or greater. Survey findings also identified that Oxford County bag tag pricing was low compared to most of the municipalities surveyed.

During the 2014 Budget process, staff submitted Bag Tag Sustainability Plan, Report PW 2013-67. During this meeting of Council, bag tags were increased to \$2.00/tag effective July 1, 2014. This pricing structure brings Oxford County’s user pay system in line with the majority of user pay program across Ontario. While curbside collection costs will not be covered by this increase, the variance between bag tag revenue and curbside collection costs has decreased.

### 3.3 Curbside Garbage and Recycling Collection System

Three separate curbside garbage and recycling collection systems operate within the County. The County provides weekly curbside garbage collection and bi-weekly recycling collection to residents living in the Towns of Ingersoll and Tillsonburg, and the Townships of Zorra, East Zorra-Tavistock, Blandford-Blenheim, and Norwich. Collection is performed by a private contractor selected through a competitive bid process. The City of Woodstock and the Township of South-West Oxford provide weekly curbside garbage collection and bi-weekly recycling collection to residents living within their respective municipalities, performed by their municipal forces.

Each system provides collection services under the same parameters:

- collection starts at 7:00 a.m.;
- only bags appropriately tagged with an Oxford County bag tag are collected;
- blue box materials must be separated into two streams – fibres and containers
- unacceptable set outs are tagged with a collection notice;
- garbage is brought to the County’s landfill site for disposal; and,
- recycling is brought to either the City of Woodstock Transfer Station or hauled directly to the processing facility.

Under Ontario Regulation 101/94 municipalities the size of Oxford County are required to:

- provide a blue box waste system that has a collection frequency of at least half the frequency of municipal waste collection;
- be adequate to deal with the anticipated blue box waste; and,
- the blue box waste system must collect:

**Table 13: Required and Optional Material for the Blue Box Program**

Collected	Required Materials	Collected	Must Collect Two of the Following
✓	Aluminum food or beverage cans	✓	Aluminum foil
✓	Glass bottles and jars for food or beverages	✓	Boxboard and paperboard
✓	Newsprint	✓	Cardboard (corrugated)
✓	PET bottles for food and beverages	✓	Expanded polystyrene food or beverage containers
✓	Steel food or beverage cans	✓	Fine paper
		✓	Magazines
		✓	Paper cups and plates
		*	Plastic film
		✓	Rigid plastic containers
		✓	Telephone directories
			Textiles (excluding fibreglass or carpet)
		✓	Polycoat paperboard containers used for food or beverages
			Expanded polystyrene packing materials

\* Plastic film is collected by Woodstock and South-West Oxford only

Oxford County currently meets legislative requirements for collection frequency and exceeds requirements for accepted blue box materials.

### 3.3.1 Public Engagement Responses

During the public engagement process, residents were asked if they would be open to having their collection day changed if it meant a reduction on program costs (see Figure 8). Responses by residents indicated that:

- 80% supported a change in collection day to reduce costs;
- 10% did not support a change in collection day; and,
- 10% either had no opinion or did not receive curbside collection.

This feedback is encouraging, as it was believed that residents were committed to their collection day. Opening up changes in collection days provides opportunities for improved



routing, leading to more efficient collection systems, which ultimately leads to more cost effective programs.

**Figure 8: Survey Response – If it lowered the Municipality’s costs for garbage collection, I/We would be willing to have my garbage collection day changed.**

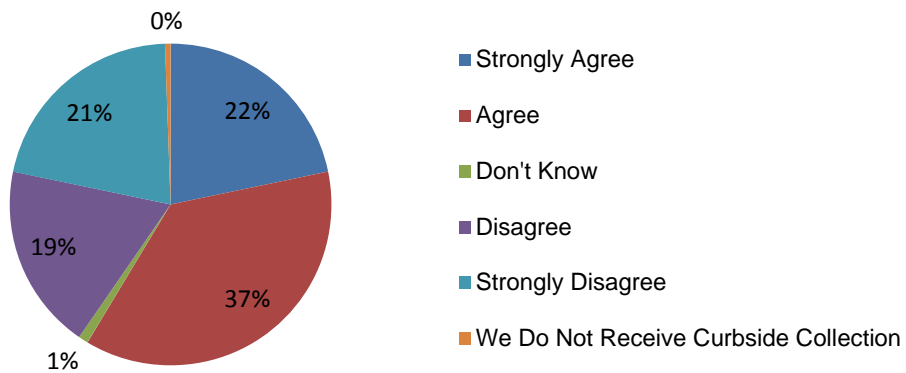


Source: GENIVAR Report Appendix A

Also during the electronic survey conducted by GENIVAR, survey respondents were divided on the frequency of recycling collection. While the majority of respondents indicated that they were satisfied with bi-weekly recycling collection, almost as many respondents indicated that they were not satisfied with the current collection system (see Figure 9). Specifically:

- 59% either agreed or strongly agreed with the current collection frequency;
- 40% either disagreed or strongly disagreed with the current collection frequency; and,
- 1% either had no opinion or indicated that they did not received curbside recycling collection.

**Figure 9: Level of Satisfaction with Bi-Weekly Blue Box Collection**



Source: Source: GENIVAR Report Appendix A

During the telephone survey, 7 in 10 respondents indicated that they would support a reduction in garbage collection during the winter to a bi-weekly schedule if it resulted in cost efficiencies. It should be noted, that less support for this initiative was seen by residents living in the City of Woodstock.

Lastly, during the Let's Talk Public Works campaign, comments varied on the subject of bi-weekly garbage collection. Those not in favour of bi-weekly collection felt that odors, insect, and vermin issues would be problematic.

Additional public engagement on the implementation of a 6-day collection system was undertaken during May and June of 2014. Comments submitted through the Speak Up Oxford site can be found in Appendix E, and survey results can be found in Appendix F.

The engagement process revealed that the majority of survey respondents are satisfied with bi-weekly recycling collection. Specifically:

- 30% were satisfied with the current recycling collection frequency;
- 20% were dissatisfied with the frequency of collection; and,
- 50% offered no comment.

Also, during the 2014 survey, the majority of survey respondents indicated that they would not recycle more if they had more frequent recycling collection. This response contradicts the results that have been seen by municipalities that have increased recycling collection frequency. Responses to this survey question may have been skewed given that the survey question referenced a 6-day collection system and public comment revealed that residents thought the County was entertaining this collection system solely for cost cutting measure and not for improved service delivery by increasing the frequency of recycling collection.

The 2014 survey also revealed that the majority of respondents would not support a 6-day collection cycle for garbage and recycling to reduce overall program costs. Specifically:

- 52% would not support a 6-day collection system;
- 26% supported the change;
- 20% were uncertain; and,
- 2% offered no comment.

When asked if they would recycle more if the County provided them with another blue box, residents indicated that this initiative would not be supported. Specifically:

- 46% indicated that they would not recycle more if they were supplied with a new blue box;
- 33% indicated that they would recycle more;
- 16% of respondents were unsure; and,
- 4% offered no comment.

As a follow-up to this question, the County asked if the residents would support receiving one new blue box with a one-time program cost of approximately \$500,000. Again, the majority of the responses were not in favour of this initiative. Specifically:

- 63% of respondents indicated that they would not support the cost associate with supplying residents with a new blue box;
- 16% indicated that they would support this initiative;

Specifically:

- 63% of respondents indicated that they would not support the cost associated with supplying residents with a new blue box;
- 16% indicated that they would support this initiative;
- 18% of respondents were unsure; and,
- 3% offered no comment.

### 3.3.2 Curbside Collection Tonnage Data

Historical garbage tonnage data identifies that in 2002 the curbside collection program collected 20,000 metric tonnes. In recent years, tonnages from the curbside collection program have decreased, averaging 13,800 metric tonnes of garbage annually. All collected curbside waste is brought to the County’s landfill site for disposal. Of the 13,800 metric tonnes (309 kg/hhld/yr.) of curbside garbage collected, approximately 3% or 500 metric tonnes originate from the IC&I sector. The 309 kg/hhld/yr. represents curbside bagged garbage and excludes curbside large article collection materials (discussed in Section 3.6) and residential waste material brought directly to the County’s landfill site by residents.

Curbside recycling collection tonnage has remained relatively stagnate over the last several years. While the County’s program performs well against other municipalities, further work is required to increase the blue box capture rate. As shown in Section 3.1.1, County waste audits identified that the average bag of garbage contains 12% blue box materials when measured by weight or 24% when measured by volume.

Table 14: 2013 Curbside Collection Data (tonnes)

Program Comparison	Total Garbage Collected Tonnage	Total Recycling Collected Tonnage
County Collection	7,314	4,197
Woodstock Collection	5,778	2,852
SWOX Collection	723	340
<b>Total</b>	<b>13,815</b>	<b>7,389</b>

Source: Oxford County Landfill Site Scale Data and Tonnage Data from Recycling Processors

### 3.3.3 Collection System Efficiencies

Direct comparison of the three collection systems is virtually impossible. Urban collection is the most cost effective collection system due to high density population contained within a small geographic area. Collection under these conditions results in:

- low mileage traveled by each collection vehicle; and,
- higher volumes of material collected.

Rural collection is the direct opposite of urban collection, with a low density population contained within a large geographic area. Collection under these conditions results in:

- high mileage for each of the collection vehicles;
- high mileage translates into higher fuel and fleet maintenance costs; and,
- lower material volumes collected on a per capita basis.



Table 15 and Table 16 provide data on the three collection systems operated within the County.

The data contained in Tables 15 and 16 have been revised based on updated household counts made available since the release of the Draft Waste Management Strategy.

Table 15: 2013 Curbside Garbage Collection System, Operational Breakdown

Collection System	Type of Collection	HHLd Count <sup>1</sup>	Road Km <sup>2</sup>	Tonnage <sup>3</sup>	Annual Collection Cost <sup>4</sup>	Cost/Tonne	Cost/HHLd	Cost/Km
Oxford	Urban/Rural	24,987	2,450	7,314	\$1,057,219	\$144.55	\$42.31	\$431.52
Woodstock*	Urban	16,887	444	4,966	\$582,676	\$117.33	\$34.50	\$1,312.33
SWOX	Rural	2,794	352	723	\$135,914	\$187.99	\$48.64	\$386.12

Note: \*less large article collection tonnage

<sup>1</sup> Household counts supplied by MPAC

<sup>2</sup> Road kilometres supplied by Area Municipalities

<sup>3</sup> Tonnage figures supplied by Count Landfill Site and Recycling Processing Facilities

<sup>4</sup> Financial data supplied by County Audited Financials

Table 16: 2013 Curbside Recycling Collection System, Operational Breakdown

Collection System	Type of Collection	HHLd Count <sup>1</sup>	Road Km <sup>2</sup>	Tonnage <sup>3</sup>	Annual Collection Cost <sup>4</sup>	Cost/Tonne	Cost/HHLd	Cost/Km
Oxford	Urban/Rural	24,987	2,450	4,197	\$922,506	\$219.80	\$36.92	\$376.53
Woodstock	Urban	16,887	444	2,852	\$535,460	\$187.75	\$31.71	\$1,205.99
SWOX	Rural	2,794	352	340	\$111,191	\$327.03	\$39.80	\$315.88

Note: collected tonnage

<sup>1</sup> Household counts supplied by MPAC

<sup>2</sup> Road kilometres supplied by Area Municipalities

<sup>3</sup> Tonnage figures supplied by Count Landfill Site and Recycling Processing Facilities

<sup>4</sup> Financial data supplied by County Audited Financials

Tables 15 and 16 identify that the County’s garbage and recycling collection programs perform well in comparison to the City of Woodstock and Township of South-West Oxford given the large, rural collection population. Private sector labour costs range between \$17-\$17.50/hour

(excluding benefits) and municipal labour costs approximately \$25/hour (excluding benefits). This data, suggests that the County’s collection program costs are driven by fuel, vehicle repair, and maintenance costs caused by high kilometres.

Given that each collection system performs well against like municipalities, consideration should be given to finding ways to achieve greater collection efficiencies while still providing a quality service. To achieve greater overall program cost efficiencies under its current system, ways to reduce the number of collection vehicles required to perform collection should be identified. The number of collection vehicles required is driven by the collection route structure and the frequency of collection.

**3.3.3.1 Route Rationalization**

All three collection systems require garbage routing analysis to ensure equipment and labour are optimized. In each collection system, garbage vehicles can hold up to 11,000 kg and recycling vehicles can hold up to 5,000 kg; however, depending on the distance travelled, collection weights may be considerably lower. When looking for routing efficiencies, individual truck tonnages, kilometres travelled, and standard work hours in a day need to be considered. The County’s collection contractor typically works a ten hour day, the City of Woodstock indicated that their collectors typically work an eight hour day, and the Township of South-West Oxford indicated that garbage collection is a seven hour day with recycling collection as a nine hour day. These times include dead travel time which consists of travel times to and from the base facility and to the recycling processing facility.

Garbage weights and arrival times were obtained from the County’s landfill site scale data, shown below in Table 17 and Table 18. The data below suggests that even when taking non-productive collection hours into consideration, improvements in the amount collected and balancing of routes is required; doing this will result in the more efficient use of equipment and the decrease in the number of collection vehicles needed.

**Table 17: 2013 Average Garbage Vehicle Weights Per Day**

	# of Trucks	Average Weight (Tonnes) Per Truck/Day				
		M	T	W	TH	F
<b>County</b>	4	9.2	4.9	5.4	6.1	9.5
<b>Woodstock</b>	4	5.9	5.9	6.1	6.3	6.8
<b>SWOX</b>	1	5.3	6.9	4.5	5.9	2.3

**Note: The Township of South-West Oxford disposes of waste material every two – three days; County and Woodstock vehicles dispose of waste material at the end of each collection day.**

**Source: Oxford County Landfill Site Scale Software**

Table 18: 2013 Average Garbage Vehicle Arrival Time at the County’s Landfill Site Per Day

	# of Trucks	Average Arrival Time Per Truck/Day				
		M	T	W	TH	F
County	4	14:32:12	13:37:10	14:14:11	14:50:28	14:50:00
Woodstock	4	13:37:33	13:45:22	14:20:16	13:47:35	13:57:04
SWOX	1	13:26:36	13:04:09	13:40:00	12:50:50	11:48:30

Note: The Township of South-West Oxford disposes of waste material every two – three days; County and Woodstock vehicles dispose of waste material at the end of each collection day.

Source: Oxford County Landfill Site Scale Software

Similar trends have been observed with County recycling collection indicating routing efficiencies are required as well. Recycling routing analysis should also be undertaken for City of Woodstock and the Township of South-West Oxford.

Economies of scale result in cost savings that arise with increased output. Based on this principle, the County, City of Woodstock, and the Township of South-West Oxford should work together to perform curbside collection, instead of operating independent programs. For example, collection boundaries are based on municipal boundaries for the three systems. This structure results in:

- boundary roads travelled several times a week by the various collection vehicles; and,
- collection vehicles being under utilized as seen on all three programs.

Through route rationalization and the elimination of municipal collection boundaries, the County, City of Woodstock, and the Township of South-West Oxford could work together to design more efficient routes that maximize equipment usage. This may mean that County collection may extend beyond the municipal boundaries of the Township of South-West Oxford and/or the City of Woodstock or vice versa.

As well, consistency in what is being collected at the curb is an issue for recycling collection. If the same material is being collected across the County then collection boundaries no longer have to follow municipal boundaries but rather, be developed based on the most efficient routes.

These approaches are further supported by the fact that 100% of all curbside garbage and recycling collection costs for the County serviced municipalities, City of Woodstock, and the Township of South-West Oxford are paid for out of the County’s Waste Management budget. Thus, it is in the best interest of the taxpayers to find innovative ways to lower operating costs without adversely impacting service.

**3.3.3.2 Frequency of Collection**

The number of collections performed in a year can drastically impact program costs. Currently curbside garbage collection is performed weekly and recycling collection is performed bi-weekly. Analysis was done to assess the potential impact on costs if the collection frequency was changed to:

- a 4 day collection with weekly garbage collection and bi-weekly two stream recycling collection;



- bi-weekly garbage collection in rural areas, weekly garbage collection in urban areas, with bi-weekly two stream recycling collection for all areas;
- a 6 day collection system with same day garbage and two stream recycling collection; and,
- a 6 day co-collection system with same day garbage and single stream recycling.

Preliminary program analysis identified cost savings would be realized if curbside collection within the entire County moved to a six day collection system. This system would mirror the curbside collection system used by the City of London. All residents would receive 42 curbside collections per year. The benefits of this system would be:

- increased blue box collection frequency;
- elimination of Saturday collection to accommodate statutory holidays; and,
- reduction in the number of collection vehicles required to perform collection each day.

The primary draw back to this system is the potential confusion among residents as to what day their collection falls on. Implementation of this type of system would require an aggressive educational campaign, alerting residents to changes in their collection day and frequency of collection. Residents would also have to refer to their annual Waste Management Calendar which lays out the curbside collection schedule for the year. And lastly, the County should implement a web based application program that alerts residents to their collection day through their smart phones and email. Additional public engagement on the implementation of a 6-day collection system would be advisable.

#### **3.3.3.3 Co-collection of Materials**

Co-collection of curbside materials is when two collection vehicles (waste and recycling) are replaced with one vehicle. There are many factors affecting the co-collection of garbage and recycling. Essentially, two collection vehicles (waste and recycling) are replaced with one vehicle. Collection of single stream or two stream recycling is dependent on access to the relative processing facility. Direct haul, using curbside trucks to deliver materials to the processing facility is the most cost efficient option where travel times are less than 90 minutes; otherwise, a transfer station is needed. If use of a transfer station is required, then shipping costs of approximately \$120 per hour for materials will be incurred. That price per hour will increase the further the processing facility is from the transfer station.

In terms of co-collection, it is possible to perform with a two stream program; however a three stream truck would be required. This type of collection vehicle is more expensive to purchase and maintain, as well as not being readily available for purchase. Two stream trucks however, are readily available, much simpler to operate and maintain, and are cheaper to buy. Two stream trucks will allow for the collection of waste and recycling at the same time.

Co-collection provides the greatest benefits in rural areas than urban areas. In rural areas, savings is seen in travel time. Assuming that an actual stop takes 60 seconds (10 to 15 seconds to load and 45 to 50 seconds to travel between stops), co-collection will save the 45 to 50 seconds travel time for a second truck for every stop. In urban areas, the stop time is closer to 30 seconds, 15 seconds to load and 15 seconds to travel. The saving under this model is less

than in the rural areas. In both urban and rural situations, the result is less vehicles, less fuel and less labour to operate co-collection vehicles.

The quantity and distribution of materials collected is also an important factor in having an efficient co-collection program. If there is too much material or there is an imbalanced distribution of materials, then efficiencies will be lost by having to empty the collection vehicle too often. Ideally, the waste to recycling ratio should be 1:1 up to 2:1 to consider co-collection. As well, generation rates should be less than 500 kg per household per year for both waste and recycling combined, with lower being better. Tonnage information for all three programs suggests that co-collection may be a viable option for consideration.

Finally, the disposal facilities and collection fleet terminal should be relatively central, close together, or en route to limit off route travel time.

#### ***3.3.3.4 Two stream Recycling Collection vs. Single Stream Recycling Collection***

Various studies have indicated that single stream recycling offers potential for more efficient collection, and reduced collection costs as compared to two stream collection. The extent of potential savings ranges depending on the collection approach that it is replacing, and the key decisions regarding the collection container and approach used (e.g. automated collection, co-collection, collection frequency etc.)<sup>5</sup>.

Table 19 below provides a comparative analysis between two stream and single stream recycling collection. Typically, municipalities with an annual recycling tonnage of 45,000 or more should consider single stream collection. The belief is that the savings achieved with single stream collection outweighs the potential increase in processing costs and revenue lost due to contamination of material.

The County should consider not only the easiest system for residents to use but also the implementation of a system that can reduce the number of collection vehicles required. In two stream or multi-sort programs, one truck compartment will 'top-out' prior to another. This is not an issue with single stream collection as the collection truck is no longer forced to leave the route and go to the processing facility to unload while at less than capacity, and can result in significant savings in transportation costs.<sup>6</sup>

In 2007, a presentation given by the Solid Waste Association of North America (SWANA) noted the collection savings from a single-stream system ranged from \$10 to \$20 per ton (\$9 to \$18 per tonne). These savings vary from municipality to municipality as factors such as population density and types of materials collected are considered, but the main cost savings are realized in reduced labor and transportation.<sup>7</sup>

<sup>5</sup> HDR Report, Prepared for Waste Diversion Ontario Continuous Improvement Fund Office - An Assessment of Single and Dual Stream Recycling, March 2013

<sup>6</sup> CRI, 2009

<sup>7</sup> Understanding economic and environmental impacts of single-stream collection systems, CRI (Container Recycling Institute), 2009

Table 19: Comparative Analysis of Two Stream vs. Single Stream Recycling Collection<sup>8</sup>

	Two Stream Recycling Collection	Single Stream Recycling Collection
<b>Pros</b>	<ul style="list-style-type: none"> <li>— Greater potential for quality control during collection (blue box collection)</li> <li>— Potential for less contamination by unsolicited materials</li> <li>— Lower collection system implementation costs for purchase of containers and vehicles (for manual blue box or blue bag collection)</li> <li>— Lower processing capital and operating costs</li> <li>— Potential for lower net recycling system costs on a per household and per tonne marketed basis, based on reported Ontario system costs for large municipal programs.</li> <li>— Potential for higher material market revenues through marketing of higher quality material and/or more effective material recovery during processing</li> <li>— Higher glass recovery rates, however, glass recovery and management can still be an issue for two stream processing facilities</li> <li>— Potential for lower percentage of processing residue, reduced loss of recyclable materials to the residue stream and lower residue disposal costs</li> </ul>	<ul style="list-style-type: none"> <li>— Some potential for increased program participation (particularly for multi-family residential households)</li> <li>— Increases convenience to customers</li> <li>— Some potential to collect more materials and increase diversion from disposal, although other program changes also contribute to this</li> <li>— Increases collection efficiency and reduces collection costs through vehicle payload optimization and reduced collection times per stop (particularly with automated collection)</li> <li>— Facilitates co-collection with other material streams</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>— Potential for lower program participation, particularly for multi-family residential households and other customers affected by space constraints</li> <li>— May be regarded as less convenient to customers</li> <li>— Some potential to collect less materials (e.g. kg/household) resulting in lower rates of diversion from disposal, however other program changes such as garbage disincentives can result in achieving similar material capture and diversion rates as single stream programs</li> <li>— Potential for lower collection efficiency and higher collection costs as multi-compartment collection can reduce vehicle payload optimization and as manual collection of multiple blue boxes increases collection times per stop (particularly as compared to automated collection)</li> <li>— Difficult to control scavenging, litter and protects recyclable materials from precipitation and other climactic effects for blue box programs</li> <li>— Potential for higher worker injury and compensation costs for manual blue box collection</li> <li>— More difficult to structure the collection system to allow for co-collection with other material streams</li> </ul>	<ul style="list-style-type: none"> <li>— Can contribute to increases in contamination by unsolicited materials</li> <li>— May reduce value of recovered materials if quality control not maintained</li> <li>— Increased processing capital and operating costs</li> <li>— Potential for higher net recycling system costs on a per household and per tonne marketed basis, based on reported Ontario system costs for large municipal programs</li> <li>— Potential operational and cost impacts to manufacturers, re-processors if market specifications are not met</li> <li>— Reduces glass recovery</li> <li>— Potential for higher percentage of processing residue, revenue losses from the loss of recyclable materials to the residue stream and higher residue disposal costs</li> </ul>

<sup>8</sup> HDR Report, Prepared for Waste Diversion Ontario Continuous Improvement Fund Office - An Assessment of Single and Dual Stream Recycling, March 2013

### 3.3.3.5 Curbside Collection Procurement Process

Cost savings can be achieved through the procurement process by extending the life of the contract from the current five years, to seven or ten years. Under current manufactures' specification, collection vehicles should last seven years travelling the distance required for County collection. Beyond seven years, equipment life will most likely expire resulting in unnecessary repair costs or even premature purchasing of new equipment.

### 3.3.3.6 Local Transfer Station

County collection vehicles must direct haul collected recyclable materials to the processing facility located in Brantford, Ontario. Direct haulage costs the County an additional \$78,000 annually. Collection contract savings could be realized if the County were to off load collected material locally on a daily basis.

The City of Woodstock operates a transfer station that receives collected curbside recycling materials from both the City of Woodstock and the Township of South-West Oxford. Analysis conducted by GENIVAR in 2012 indicates that the City's transfer station should have sufficient capacity to accept County collected material as well. If material capacity grows to the point of exceeding the Woodstock transfer station capacity, then GENIVAR estimates an additional \$100,000 would be needed to retrofit the facility to handle the increased volume. Partnering with the City would eliminate curbside collection contract pricing associated with direct haul pricing to the recycling processing facility.

Another option for consideration is for the County to build a transfer station located at the County's landfill site. This convenient location is just five minutes from the Highway 401 making bulk hauling of material to a processing facility very convenient. As well, the landfill site is conveniently located for County and South-West Oxford collection which represents 61% of the collected blue box materials. Should the County and Township of South-West Oxford pursue co-collection in the rural areas, having a transfer station at the landfill site will be very convenient when emptying vehicles of their material load. Costing for this option will be presented to Council during the upcoming RFP process, accompanied by any capita costs requirements for building construction.

## 3.4 Collection Program Compliance by Residents

Analysis of both the curbside audit results and the customer service log identified residential program compliance deficiencies in the following areas:

- failure to have material at curb by 7:00 a.m. on the morning of collection;
- use of unacceptable and over weight collection containers;
- set outs placed in obscured areas, hidden from the collection driver's sight line; and,
- unacceptable material placed at curb, posing hazardous to both pedestrian traffic and the collection crew.

### 7:00 a.m. Set Out Requirement

The County cannot guarantee a set time for curbside collection as many variables such as road closures, inclement weather, vehicle breakdowns, and replacement staff can impact collection

times and require routes to be altered in order to complete collections for the day. Therefore, all garbage and recycling set outs must be placed at the curb by 7:00 a.m. the morning of collection. Doing so will eliminate the amount of missed collections calls received and alleviate resident frustration.

Unacceptable and/or Over Weight Collection Containers

The weight of set outs and the use of non-traditional collection containers is problematic and has cause increased injuries to workers.

Ideally, garbage should be placed in a 75 litre (76 cm x 81 cm) green or black garbage bag with a County bag tag applied to the top half of the bag, with both ends of the tag clearly visible. The weight of each bag cannot exceed 20kg.

Residents have moved to using oversized bags such as industrial size bags or leaf and yard waste bags, often resulting in overweight bags and bags not containing the correct number of County bag tags. Residents have also started using different colour of bags. For example, blue and clear bags are associated with recycling collection and will be over looked by garbage collection drivers, especially if the garbage bag tag is not clearly visible from the road. Orange garbage bags make it difficult to see the County bag tag. The County uses pink bag tags for increased visibility. White garbage bags are difficult to see when placed in the snow.



Also, instead of using a standard garbage bag, waste material is often placed in containers either loose or in small kitchen catcher garbage bags. Doing this presents several health and safety issues. First, it is a hazard for collectors to reach into a container to pull out bags. Cuts are often sustained from doing so. Second, loose and rotting material is not only problematic but creates other issues like residual waste adhering to the bottom of the container. Collectors will not reach in to retrieve this waste. Waste material should be placed at the curb in such a manner that the container/bag can be picked up and the contents deposited into the truck without the worker reaching into the container to retrieve waste materials.

Using containers for garbage set outs (i.e. metal or plastic drums) also increases the amount of non-compliant bag tag set outs. Using non-garbage containers to set material out in can be problematic when the container is either too heavy to lift or if does not have handles. Residents often comment that they are able to get their set out to the curb, so why can't the driver lift the set out. When performing aerobic activity for seven hours a day and lifting more than





1200 set outs in a day, adhering to program guidelines is essential to preventing worker injury.



With regards to blue box containers, residents like to use 75 litre garbage containers or purchase blue box bins from local commercial establishments. County issued blue boxes are ergonomically designed for the curbside collection process. Consideration has been given to water retention, durability, lifting handles and weight restrictions. Non-county blue box containers do not take the aforementioned into consideration resulting in awkward, heavy, and non-durable containers that impeded the efficiency of the collection process.

### Hidden Collection Set Outs

Set outs hidden from view are one of the primary reasons for missed collections. Set outs must be clearly visible from the road. Using non-traditional collection containers in addition to placement of set outs behind retaining walls, snow banks, vegetation, etc. makes it virtually impossible for collectors to see the set out.

### Unacceptable and Hazardous Material in Set Outs

Hazardous materials like fluorescent light bulbs and household cleaning chemicals present a serious danger to both the collector and pedestrians. Materials have both exploded and ignited within the last three years, and have resulted in worker injury and loss of recyclable materials.

To resolve these issues the County has designated more resources to enforcing the guidelines of the curbside collection program. Increased enforcement will have a positive impact on the program but additional assistance is required by way of promotion and educational material as well as the development of a curbside collection by-law. Having a by-law in place that can be enforced across all eight municipalities will help enforce program guidelines as well as establish a base line for program delivery among the three collection programs operating within the County.

The question of who has the authority to implement a curbside collection by-law is very much an issue, as under the *Municipal Act* curbside collection falls to the area municipalities. Therefore, it would be advisable that a curbside collection by-law be drafted by the County together with the area municipalities, for implementation by all.

## **3.5 Increased Blue Box Capture Rate**

GENIVAR reported that in 2010, approximately 49% of available blue box materials were not recovered<sup>9</sup>. Given that curbside recycling tonnages remain unchanged since 2010, it can be

<sup>9</sup> GENIVAR Report Integrated Waste Management Plan

assumed in 2013 the County’s blue box material capture rate has also remained unchanged. To improve blue box capture rate, municipalities must look at frequency of collection and the amount of residential storage space available to collect blue box materials.

Section 3.3 of this report addresses collection frequency and provides options for increased blue box collection. Studies undertaken to assess capture rate in municipalities that provide additional blue boxes have shown an increase in the recycling capture rate by an average of 9%. Applying this to the County of Oxford, an additional 644 tonnes could be recovered which would represent an approximate increase in diversion rate of 1.6%<sup>10</sup>.

The County retails blue boxes at cost to residents. Through bulk purchasing, unit costs have been reduced from \$6.00 for a 70 litre and \$11.00 for a 96 litre box to \$4.50 and \$5.00 per box. Increased bulk purchases will reduce the unit cost per bin further. The County should continue with bulk purchases of blue boxes. However in 2015, the County should assess whether a one time only new blue box should be distributed to residents. Initiating such a program would be dependant on the type of changes made to the curbside collection program.

Blue box capture rates may also be increased by an additional 7% per household should single stream recycling be implemented across the County.<sup>11</sup> The rationale behind single stream recycling is that it’s more convenient for residents to recycle by not having to separate their blue box materials into two streams.

The results of the public engagement process identified that the residents of Oxford County did not support this System Improvement Option.

### 3.6 Curbside Large Article Collection Program

Large article collection consists of a special curbside collection pick-up of large, bulky items in which all material is brought to the County’s Waste Management Facility for disposal. Bag tags are not required for this service. Materials accepted at the curb are non-recyclable items that cannot be easily broken down and placed into a traditional 75-litre garbage bag. Materials meeting these requirements include mattresses, household furniture, pool filters, etc.

There are four large article collection programs operating within the County. Table 20 below identifies historical program costs per collection system on an annual and per tonne basis. All program costs are covered through the County’s Waste Management Budget.

**Table 20: Large Article Collection Program Cost**

	2011		2012		2013	
	\$/yr.	Tonnes/yr.	\$/yr.	Tonnes/yr.	\$/yr.	Tonnes/yr.
<b>County</b>	\$62,927	451	\$61,345	400	\$73,033	437
<b>Woodstock</b>	\$190,800	750	\$202,527	812	\$181,649	812
<b>Ingersoll</b>	\$85,648	267	\$85,237	256	\$89,755	268

<sup>10</sup> GENVIAR Report Integrated Waste Management Plan Appendix A

<sup>11</sup> HDR Report, Prepared for Waste Diversion Ontario Continuous Improvement Fund Office - An Assessment of Single and Dual Stream Recycling, March 2013



Tillsonburg	\$79,989	389	\$79,671	361	\$79,113	343
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**Notes:**

All program costs include tipping fees obtained from County Audited Financials  
 Woodstock tonnages based on historical data; tonnage data obtained from County Landfill Site Scale Data

County of Oxford Large Article Collection

Once a year, starting at the end of April through to the end of June the County provides curbside large article pick-up for residents living in the Townships of Zorra, East Zorra-Tavistock, Blandford-Blenheim, Norwich, and South-West Oxford. One week is dedicated to large article collection per municipality. Residents are required to place large items at curb by 7:00 a.m. the Monday morning of their collection. The collection contractor will only travel a road once and will only take accepted materials. Uncollected materials are the responsibility of the resident to remove from curbside.

City of Woodstock Large Article Collection

The City of Woodstock offers curbside large article collection to residents five times a year with a set out restriction of no more than five items per collection. The same program terms and conditions apply to the City's program as the County's program. The City moved from an annual collection cycle like the County's program as a way of addressing massive set outs and streamlining of program costs. Collection crews will only travel the road once and will only take accepted materials. Collection is carried out using compaction curbside collection garbage trucks.

Town of Ingersoll Large Article Collection

The Town of Ingersoll's large article collection program is similar to the County's in that it is offered once per year, starting at the end of April. The collection crew separates out recyclable materials like electronics, scrap metal, and construction and demolition materials. Collected electronics are taken to the Fusion Youth Centre for processing, scrap metal material is reclaimed by the Town, and the construction and demolition material is brought to the County Construction and Demolition Depot. Collection is carried out by blocking off municipal streets and using a loader to put set outs into municipal vehicles designed for snow plowing and removal. Several passes of streets are performed to ensure that all material is collected. In 2014, the Town plans to implement changes to the collection program and anticipates a savings of \$3-\$4 per household.

Town of Tillsonburg Large Article Collection Residents living in the Town of Tillsonburg do not receive curbside large article collection. Instead, the Town offers year round disposal of large items at the Tillsonburg Transfer Station. Reimbursement for the Town's large article collection program is based on an average program cost per household for the programs operated by the County, City of Woodstock, and Town of Ingersoll.

### 3.6.1 Public Engagement Responses

During the May - June 2014 public engagement process, residents were asked to provide feedback on the current large article collection program. Survey questions included:

How valuable is the large article collection program?

- 56% of respondents indicated that they found the large article collection program to be very valuable;
- 13% did not find the program valuable; and,
- 31% offered no comment

Would you support moving towards a user-pay system for large article collection if it cut back the County's overall garbage collection costs?

- 40% of respondents indicated that they would not support a user-pay system for large article collection;
- 30% indicated they would support such an initiative;
- 26% were unsure; and,
- 4% offered no comment

Would you support ending the large article collection program if it cut back the County's overall garbage collection costs?

- 57% of respondents indicated that they would not support ending the program;
- 21% indicated they would support ending the program;
- 18% were unsure; and,
- 4% offered no comment

Concern was also raised over the potential increase in illegal dumping should the program be cancelled as well as needing to offer a service to residents not able to take their material to the County landfill site.

### 3.6.2 Program Deficiencies

Standardization of program delivery is essential to reducing program costs as well as reducing resident confusion on collection frequency and what is considered an acceptable material. The fragmented delivery of this program has resulted in the collection of unacceptable materials, particularly waste material that should be set out during the regular curbside garbage collection. Quantifying bag tag revenue lost through the large article collection program is difficult without performing audits on each individual collection vehicle. However, visual curbside audits suggest that 25% of material set out at the curb during large article collection should have been part of the weekly user-pay curbside garbage program.



Acceptable Set Out



Unacceptable Set Out

Observations from curbside audits as well as incoming material loads suggest that substantial unacceptable material is being collected by all curbside collection systems. Collection crews are inclined to collect all material set out at the curb to avoid incurring additional collection costs by being sent back to recollect due to property standards complaints. Where unacceptable material is left behind, collection is often performed by the municipal public works departments who ultimately incur operational and disposal costs because of residents refusing to dispose of the material themselves.

During 2013, the County conducted a scan of large article collection programs offered within municipalities operating a user pay system for curbside garbage collection. Findings showed (Table 21) that the Oxford County was the only municipality offering free large article collection and that municipal programs either required a user pay system for large article collection or required residents to take material to the local landfill site at current tipping fee rates.

Table 21: Large Article Collection Programs among Municipalities with a User Pay Garbage System

Municipality	Large Article Fee Structure
County of Wellington	N/A – taken to landfill site for disposal, subject to tipping fees
Oxford County	N/A – free annual curbside collection
City of Kingston	N/A – taken to landfill site for disposal, subject to tipping fees
Kawartha Lakes	\$5.00/item
Blue Water Recycling Association	N/A – taken to landfill site for disposal, subject to tipping fees
City of Stratford*	\$10.00/tag
County of Simcoe*	N/A – taken to landfill site for disposal, subject to tipping fees

**Note:** Scan of municipalities within the County’s WDO Rural Regional Municipal Grouping. \*Denotes municipalities outside of the Rural Regional Municipal Grouping but have progressive user pay programs in place.

### 3.7 Recycling Processing

The County's curbside blue box materials average 7300 tonnes annually, of which 4194 tonnes of materials are sent to HGC Management Inc. in Brantford for processing and 3192 tonnes are sent to Canada Fibres in Etobicoke. The County performs a direct haul of material to HGC Management daily, where as the City of Woodstock and the Township of South-West Oxford collect their material at the City's transfer station and then haul bulk loads of material to Canada Fibres. All program costs associated with the processing of recyclable materials are covered through the County's Waste Management budget.

The County's material was sent to HGC because of a competitive tender process. The City and South-West Oxford's material was sent to Canada Fibres after the County awarded its processing tender. Both processors offered similar processing costs and reimbursement for material sales.

Consideration should be given to sending all curbside collected blue box materials to the same recycling processing facility. Doing so will standardized acceptable materials allowed in the blue box, reduce resident confusion as to what can go in the blue box, and decrease blue box promotion and education costs. As well, given that, single stream recycling collection may provide cost efficiencies in the curbside collection program, single stream, and two stream recycling processing should be tendered at the same time as the curbside collection contract. Doing so will allow the County to assess which collection and processing option will offer the most cost effective approach.

It should be noted that survey findings have determined that single stream recycling processing yields a higher residual waste rate and can be more costly. However, municipalities who have elected to implement single stream recycling have found that the savings found on the collection side outweigh the costs incurred on the processing side.

## 4 RESIDENTIAL DIVERSION PROGRAMS

### 4.1 Organic System

Organic collection consists of curbside collection of kitchen waste called Source Separated Organics (or more commonly know as the Green Cart Program), and the collection of brush, leaf and yard waste. Under Ontario Regulation 101/94, municipalities are required to provide leaf and yard waste collection systems with the scope of the systems varying depending on population size. At present, there is no regulatory requirement for municipalities to collect source separated organics.

#### 4.1.1 Source Separated Organics (SSO)

The County of Oxford does not collect SSO. During the June 26, 2013 meeting of County Council, Staff presented Report PW 2013-39, which recommended not proceeding with a curbside collection program, but rather, to re-launch the Back-yard Composting Program; Council approved this recommendation.

#### 4.1.2 Public Engagement Responses on Backyard Composting

When asked during an online survey conducted by GENIVAR Inc. in 2012 (Figure 10) about level of satisfaction with the Leaf and Yard Waste Collection System, respondents indicated that:

- 47% of respondents were satisfied with the program; and,
- 18% of respondents had no idea what the program options were.

The remaining 35% indicated that they were not satisfied with program options or they did not generate leaf and yard waste.

Figure 10: Survey Response – Satisfaction with Leaf and Yard Waste Collection Options, GENIVAR Inc.



Source: GENIVAR Report Appendix A

During the May - June 2014 engagement process, residents were asked if they used a backyard composter. Survey responses identified that:

- 42% of respondents use a backyard composter;
- 43% indicated that they do not use a backyard composter;
- 11% sometimes use a backyard composter; and,
- 4% offered no comment

When asked if launching a public education program would encourage residents to compost more:

- 46% of respondents indicated that such a program would not have a positive effect on their composting habits;
- 22% were unsure;
- 17% indicated such a program would have a positive effect on their composting habits; and,
- 15% either do not compost or offered no comment

Lastly, when asked if residents would use a backyard composter if an incentive program was put in place to reduce the cost of the composters, the survey responses indicated that:

- 36% of respondents indicated that they would still not use a backyard composter;
- 30% indicated it would encourage them to use a backyard composter;
- 24% were unsure; and,
- 10% offered no comment.

#### 4.1.3 Education and Access to Backyard Composters

Under Section 11 of Ontario Regulation 101/94 – *Recycling and Composting of Municipal Waste*, a local municipality that has a population of at least 5,000 shall establish, operate, and maintain a leaf and yard waste system that includes:

- a. the provision of home composters to residents by the municipality at cost or less;
- b. the provision of information to residents,
  - i. publicizing the availability of home composters,
  - ii. explaining the proper installation and use of home composters and the use of compost,
  - iii. encouraging home composting<sup>12</sup>

The County promotes the use and sale of backyard composters through the County's website and annual Waste Management Calendar. During the County's last bulk purchase, composters were purchased for \$45/unit and retailed to residents for \$10/unit. The City of Woodstock purchases home composters independently from the County and retails them for \$22/unit. Composters can be purchased from the County Administration Building and Waste Management Facility. The County also encourages area municipalities to stock composters for retail in order to make access to them more convenient for the residents. Presently, six of the eight municipalities stock backyard composters for sale.

Resource information on the installation and proper use of backyard composters is provided to the resident at time of sale and on the County's website. As well, County staff has provided "How to Compost" sessions to community groups upon request.



<sup>12</sup> Ontario Regulation 101/94 Section 11



## 4.2 Brush, Leaf and Yard Waste

The brush, leaf, and yard waste program is separated into three areas – Education (see Section 4.1.3), Collection, and Processing.

### 4.2.1 Collection of Brush, Leaf and Yard Waste

Under Section 12 of Ontario Regulation 101/94 - *where the leaf and yard waste system of a local municipality that has a population of at least 50,000 must include the collection or acceptance of leaf and yard waste in a manner that is reasonably convenient to the generators of leaf and yard waste in the municipality.*<sup>13</sup>



The County funds the operation of 11 Brush, Leaf, and Yard Waste Depots located throughout the County. Ten of these depots are operated by area municipalities with the eleventh depot located at the County's Waste Management Facility. The Towns of Ingersoll and Tillsonburg and the City of Woodstock provide curbside collection of this material twice per year. Collected material is taken to their municipal depot to await shipment to the County's Compost Facility. Leaf and yard waste curbside collection is not funded by the County, however, all transportation costs to the County's facility as well as processing costs associated with this material is funded by the County.

Residents can bring waste material consisting of natural Christmas trees and other plant materials to any of the 11 Brush, Leaf, and Yard Waste Depots located throughout the County. Tree limbs or other woody materials in excess of seven centimeters in diameter are not accepted.

<sup>13</sup> Ontario Regulation 101/94 Section 12



**Table 22: Brush, Leaf and Yard Waste Depots**

Depot Location	Operating Hours
Blandford-Blehneim – Drumbo Public Works Yard	No restrictions
Hickson – 158 Loveys Street	No restrictions
Ingersoll – Public Works Yard	No restrictions
Innerkip – Corner of George & Main Streets	No restrictions
Norwich – Phebe Street	No restrictions
Otterville – York Street	No restrictions
Oxford County Waste Management Facility – Salford	M-F 8:30 am – 4:30 pm and Sat 8:00 am – 4:00 pm
Tavistock – 18 Hendershot Street	No restrictions
Tillsonburg – 50 Newell Road	Operating hours vary throughout the year
Woodstock – Public Works Yard	7:00 am – Dusk
Zorra – 783045 Road 78	No restrictions

Most of the depots are open to the public seven days a week, 24 hours a day with three of the depots being restricted to set operating hours. This model keeps program costs down, however it has created opportunities for residents to take advantage of the program and illegally deposit unacceptable waste material such as garbage, hazardous waste, electronics, tires, etc. Depots located in more remote areas of the County experience higher volumes of illegal dumping. Increased signage and by-law enforcement has helped some in reducing unacceptable material left behind.

Independent contractors or municipal forces transport collected compost material to the County’s Compost Facility located east of the Waste Management Facility in Salford. The trucks used to transport the material range from municipal sanding trucks to tri-axle vehicles used by the private sector. Transportation costs are approximately \$200,000 annually. The use of more suitable equipment would lower the transportation costs incurred by this program.

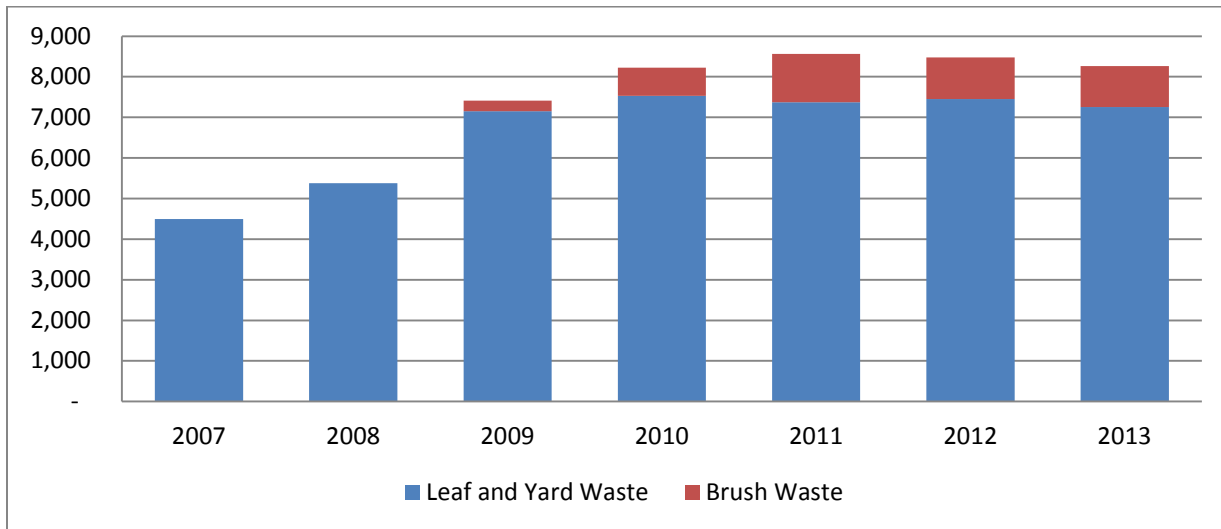
The County has noted concerns regarding the operation of the municipal depots during and after loading of material onto trucks for transport to the County’s Compost Facility. Resident safety is also concerning when off loading waste material around heavy equipment, rough terrain, and potentially loose or unsecured retaining walls.

Lastly, a historical review of the year end invoicing submitted to the County by the area municipalities shows that the costs to operate the municipal depots vary with the cost per tonne to manage the sites ranging between \$6.00 and \$22.00 per tonne.

**4.2.2 Processing of Brush, Leaf and Yard Waste**

In 2013, the County received 2138 loads of material from the municipal depots, representing 13% (8,345 tonnes) of the incoming waste received at the Oxford County Waste Management Facility. Figure 11 illustrates that material volumes have doubled over the last seven years.

Figure 11: Brush, Leaf and Yard Waste Annual Tonnage Handled by the County's Compost Facility



Source: Oxford County Waste Management Facility Scale Data

Increase material tonnages are attributed to several factors:

- i. *Increased program awareness among County residents* - by year three of the program (2009) residents had become used to separating their brush, leaf and yard waste from the garbage stream and taking this waste material to one of the 11 depots located throughout the County.
- ii. *Improved depot operations* – in 2009 the County began working more closely with the area municipalities to move collected material to the County's Compost Facility on a regular basis. Stock piling of waste material lead to long wait times crossing the scale at the County's Waste Management Facility and operational issues at County's Compost Facility.
- iii. *Improved legislative compliance at municipal depots* – also in 2009 less burning and improper disposal of collected material occurred.

Further regulatory requirements include:

- i. *The transport of the collected or accepted leaf and yard waste to a leaf and yard waste composting site;*
- ii. *The provision of a leaf and yard waste composting site;*
- iii. *The provision of information to promote effective source separation of leaf and yard waste and to promote the full use of the composting system;*
- iv. *Every reasonable effort be taken to ensure that the compost produced is used as a soil conditioner;*
- v. *Ensuring the system is adequate to deal with the anticipated leaf and yard waste; and,*

- vi. *Ensuring the waste material is either composted at a leaf and yard waste composting facility, land applied by the operator of the system, or transported to a person who will directly apply the waste to the land.*<sup>14</sup>

The County’s leaf and yard waste system complies with all legislative requirements of Section 13 except one; it falls short in meeting the requirement of being adequate to deal with the anticipated leaf and yard waste.

Furthermore, the operation of the County’s Compost Facility must comply with Part V of Ontario Regulation 101/94. Under the legislation, the County is required to:

Compliance	Requirement
X	<i>ensure that leaf and yard waste not be stored for more than four (4) days before it is composted;</i>
✓	<i>ensure that the total amount of compost on the site shall not exceed eighteen times the monthly process design of the site;</i>
X	<i>turn the windrows at least five (5) times at regular intervals after the temperature first reaches 55 degrees Celsius and the temperature must reach at least 55 degrees Celsius after the fifth turning;</i>
X	<i>ensure the compost mass receives proper ventilation adequate to ensure aerobic conditions are maintained;</i>
✓	<i>cure the compost for six months once all requirements are met; and,</i>
X	<i>turn the cured compost once a month and temperature taken weekly.</i> <sup>15</sup>

Currently, the operation of the County’s compost facility does not meet the requirements of Part V of Ontario Regulation 101/94.

Received brush material is stored in a large brush compound to be ground and transported off site by the contractor. No revenue is generated from the handling of this material. Received leaf and yard waste material is stored at the compost facility. Depending on the year, the County can generate between \$5,000 to \$15,000 annually for the sale of finished compost.

As a result of the increased material tonnages, operational issues have arisen around:

- the suitability of the equipment used to handle the material;
- increased costs to ship brush material off site, that could easily be composted; and,
- available staff resources to manage and oversee the County’s composting operations.

Composting operations have become out of compliance with the legislation because of the deficits experienced in these areas, and operational issues have resulted in insufficient space to receive incoming material as well as the inability to compost a marketable product.

<sup>14</sup> Ontario Regulation 101/94 Section 13

<sup>15</sup> Ontario Regulation 101/94 Part V

For the County to operate a compliant compost facility that can handle incoming material volumes and produce an easily marketed finished product, the following needs to happen:

1. Incoming material needs to be placed immediately into windrows.
2. Daily turning of windrows to dry material and ensure proper ventilation and aerobic activity.



If the above requirements are achieved then the entire composting process can be completed within 15 days prior to moving to the curing stage. Decreasing the time required to move dried material to the curing stage will free up valuable real estate at the site for the receipt of incoming material. During the busy season, staff resources and equipment needed to complete the above activities falls in the range of 30 hours per week. This estimate is based on recent procurement pricing received from two contractors with previous experience with the County's Brush, Leaf, and Yard Waste program operations.

When available, County Landfill Site staff work at the compost site, placing material into windrows and turning the windrows to ensure proper ventilation and drying of material. The work at the site is performed using a small loader equipped with a 2.5-yard bucket, which is shared between the Landfill Site and Compost Facility. Turning of windrows, particularly during the busy season (April – November), can take up 40-60 hours at a time due to high material volumes. Use of Landfill Site staff and of the loader to work at the Compost Facility for this length of time places operational stresses on the Landfill Site. To minimize the impact on the Landfill Site, staff and equipment from the Roads Department have been used in unison with the Landfill Site staff and resources. However, as operations become more streamlined across the County, assistance from other departments is limited.

During the 2014 Budget Process, the County approved a system improvement that consisted of hiring one full-time employee (FTE) and purchasing a larger equipment loader. Based on a cost benefit analysis conducted prior to the budget approval process it was deemed that implementation of this model would not only bring composting operation back into compliance with the regulation, but will allow the County to resume a viable operation that will produce a quality product while decreasing overall program operating costs.

Since the release of the Draft Waste Management Strategy in May 2014, the County has taken steps to address the Compost Site operational issues identified in this section and has since brought the facility into compliance. No further operational or regulatory issues are present at the County's Compost Site.

### 4.3 Special Waste Collection

The County of Oxford has been very proactive in providing services to the residential community, which encourages and makes access to waste diversion both convenient and cost effective. Due to the geographic size of the County, efforts are made to offer special waste collection locations in centralized locations of the County.

Over the last nine years, the County has noted a decrease material tonnages collected at the various special waste collection events. One can only assume that this trend is due to the:

- the success of the small vehicle transfer station at the County’s Waste Management Facility; and,
- the various private sector collection outlets available to residents through provincial collection programs like:
  - Ontario Tire Stewardship;
  - Ontario Electronic Stewardship; and,
  - Stewardship Ontario’s (Orange Drop Program).

The assumption is that residents have rid their homes of waste materials stockpiled over the years, and now only stockpile waste over a short period.

#### 4.3.1 Scrap Metal Depots

The County has operated scrap metal depots since 2004. Under the terms and conditions of the program, residents are able to bring metal products, free of hazardous waste and Freon at no cost. Originally, depots were operated in April and September of each year. However, due to low material tonnages collected at the fall depots, the County discontinued them. The spring depots operate from 8 am – noon on the third and fourth Saturday of April.

Table 23 illustrates the annual tonnage decrease over the last nine years. Because of low material tonnages, the County is finding it increasingly more difficult to find scrap metal collectors willing to service the depots. To entice more contractors to bid on servicing the scrap metal depots, the County rolled the scrap metal depots, special waste collection (Section 4.3.2), and scrap metal collection at the County’s Waste Management Facility (Section 4.3.3) into one contract. Doing this resulted in a more competitive bid process in 2013. However, material tonnages collected at the depots has dropped drastically since 2012, forcing the County to re-examine the merits of continuing with this service given that scrap metal is collected at the Special Waste Collection Events and at the County’s Waste Management Facility depot.

**Table 23: Scrap Metal Tonnages Collected at Depots, Events and Landfill**

Locations	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Norwich	2.56	1.91	2.19	1.3	0.96	1.58	1.8	1.8	0.45	0.32
Foldens	2.33	2.93	0.42	0	2.05	2.3	1.45	1.45	0.74	0.18
Princeton	4.98	3.21	7.51	1.29	2.49	4.25	2.27	2.27	1.87	0.18
Embros	4.26	2	4.26	1.34	4.51	4.42	5.19	4.21	2.16	1.86
Tavistock	3.58	2.17	1.69	2.03	2.65	3.3	3.03	3.34	1.49	1.03
Plattsville	2.54	1.37	1.95	1.55	0.79	0.73	0.39	-	-	-

Thamesford	3.78	2.39	3.89	2.99	2.07	2.6	0.45	-	-	-
Innerkip	8.35	4.66	7.13	7.42	3.27	4.7	4.38	-	-	-
Otterville	2.77	2.5	2.85	5.66	2.11	2.13	1.9	-	-	-
Dereham Centre	2.19	1.1	10.68	2.22	0	0.77	1.88	-	-	-
	<b>37.34</b>	<b>24.24</b>	<b>42.57</b>	<b>25.8</b>	<b>20.9</b>	<b>26.78</b>	<b>22.74</b>	<b>13.07</b>	<b>6.71</b>	<b>3.57</b>
Landfill	-	-	176.14	178.88	169.44	129.96	130	105.45	99.25	132.18
Events	112.9	87.54	75.47	103.98	51.16	52.56	52.484	58.4	52.57	26.19

### 4.3.2 Special Event Collection

Historically, the County offered multiple special waste collection events for white goods and scrap metal, household hazardous waste, and electronic collection. To reduce overtime-staffing hours and contractor costs, the County consolidated these events into four annual events with two in the City of Woodstock (spring and fall) and one spring event in each of the Towns of Ingersoll and Tillsonburg. Waste collected at these events expanded to include:

- household hazardous waste;
- electronics;
- scrap metal;
- white goods; and,
- tires.

Consolidation of the events was well received by the residential community as a convenient one-stop shop for waste disposal.

Staffing of these events is becoming increasingly difficult and expensive. County staff overtime hours exceeds \$10,000 annually. Additionally, the County incurs over-time staffing and equipment costs by the area municipalities to assist with the events as well as costs associated with hiring temporary staff to fill vacant positions. Added to this are decreased material tonnages, resulting in the need to re-evaluate the frequency of these special collection events.

Table 24 illustrates material tonnages collected at both the County’s Waste Management Facility and Special Waste Collection Events. The event tonnages are further broken down by event, showing the highest collected material volumes at the spring Woodstock event. The data presented below identifies that 80% of material tonnages were collected at the County’s Waste Management Facility in 2013.

**Table 24: Special Waste Collection Tonnage by Location**

Year	Landfill	Event	Woodstock Spring	Woodstock Fall	Tillsonburg	Ingersoll
2010	155.31	84.31	21.27	32.77	12.75	17.52
2011	167.78	55.49	22.59	15.20	9.91	7.79
2012	139.49	44.85	16.37	15.61	7.29	5.57
2013	228.94	56.06	22.47	11.63	7.19	11.18

Note: Landfill tonnages comprise of the same material collected at the events

**4.3.3 Oxford County Transfer Station**

The County’s small vehicle transfer station was opened in 2006. Using a saw-tooth design, residents are able to conveniently separate out their waste and recyclable materials in a safe and hazard free environment. Through the assistance of the transfer station operator, residents are provided with guidance and direction on the acceptance and placement of materials.

Since 2008, transfer station operations have expanded to include the collection of not only waste, scrap metal, white goods, tires, and agricultural bale wrap, but also household hazardous waste, electronics, cardboard, blue box materials, and construction and demolition materials. Due to the success of the diversion depots at the County’s small vehicle transfer station, operating hours of the household hazardous waste depots were expanded from three to six days per week.

Table 25 shows that 32,383 tonnes of recyclable material have been collected through the small vehicle transfer station since 2008. While the majority of the material weight is from construction and demolition waste, tonnage trends show consistency with agricultural bale wrap and increased collection of hazardous waste, scrap metal, and blue box materials (includes cardboard). Not surprising is the decrease in tonnage for electronics and tires. Ontario Tire Stewardship and Ontario Electronic Stewardship have aggressively sought out collection vendors throughout Ontario, which has resulted in more collection outlets in Oxford County participating for material tonnages.

**Table 25: Waste Diversion Efforts at the County Waste Management Facility**

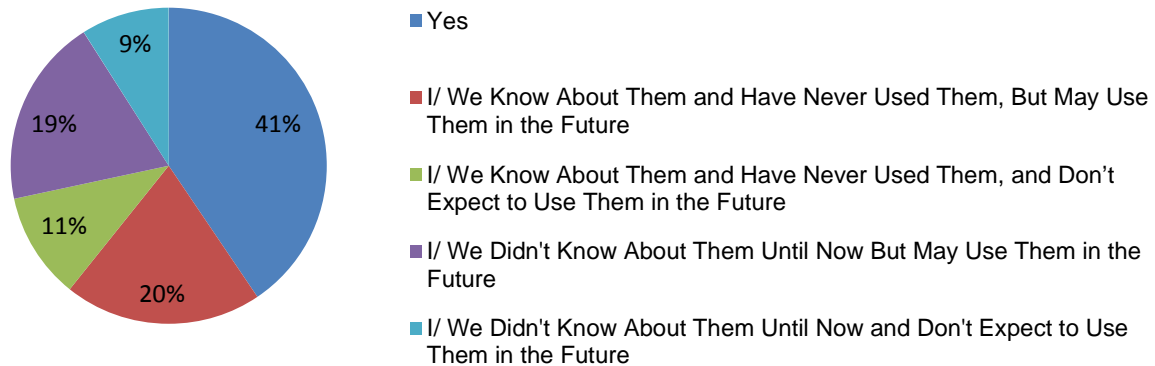
	Bale Wrap	C&D	Electronics	Hazardous Waste	Scrap Metal	Tires	Blue Box	Total Tonnes
<b>2008</b>	16	-	-	-	169	-	-	185
<b>2009</b>	16	-	-	77	130	18	-	241
<b>2010</b>	14	6,186	98	84	130	58	30	6,599
<b>2011</b>	15	7,253	120	99	105	47	63	7,703
<b>2012</b>	14	7,077	84	56	99	55	66	7,452
<b>2013</b>	15	9,779	68	102	132	29	78	10,203
<b>Total</b>	90	30,295	370	418	766	207	237	32,383

**Note: Tonnages exclude brush, leaf and yard waste**

During the first electronic survey, GENVIR asked residents if they knew about the County’s free recycling depots located at the Waste Management Facility. The results of this survey question are shown below in Figure 12.



**Figure 12: Resident Level of Awareness of the County’s Free Year Round Recycling Depots and if they Have Ever Used the Depots**



Source: GENIVAR Report Appendix A

Forty-one percent of the respondents indicated that not only did they know about the free depots but that they have used the depots in the past. One concerning finding was that 28% of the respondents indicated that they did not know about the County free recycling depots. Of that 28%, 19% indicated that now that they know about the depots they may use them in the future. These results identify a clear need for improved promotion and education of County services.

#### 4.3.4 Community Recycling Centres (CRCs)

Also during the first electronic survey, GENIVAR asked residents if they were willing to use waste depots and special collection events. Survey findings identified that 41% of the respondents would be willing to use a depot or event located anywhere in the County and/or within a 20 minute drive and 53% said they would only use depots and events located 10 minutes from their home (see Figure 13). Provincial industry standard indicated that a 20 minute drive time is an acceptable distant for residents to travel.

**Figure 13: Willing to Use Waste Depots and Special Collection Events**



Source: GENIVAR Report Appendix A

Many municipalities choose to operate CRCs instead of offering collection events. The benefit to offering CRCs is that they are accessible all year round, offering a convenient location to take waste material for diversion. During the development of GENIVAR’s IWMP (Appendix A),

GENIVAR identified that CRCs are becoming increasingly more popular in major urban centres. More specifically, GENIVAR reported that published studies have assessed the performance of residents who receive both curbside collection and have access to a supplemental depot, divert approximately 1% more annually. Based on The County's 2010 Datacall submission, this would result in approximately 400 tonnes of additional diverted material.<sup>16</sup> Given the County's population size and quantity of material relative to GTA municipalities that currently operate CRCs, GENIVAR forecasts that the County would need to invest \$2,000,000 in capital expenses and \$300,000 annually in operational expenses.

An alternative to operating a Community Recycling Centre would be to form partnerships with not-for-profit organizations such as Habitat for Humanity, Fusion Youth Centre, etc. who have collection points throughout County for people to dispose of recyclable waste. One caveat would be with the disposal of household hazardous waste. Given the inherent dangers and regulatory requirements associated with the collection and storage of this waste, collection of this material is best done at the County's landfill site or at Special Waste Collection Events.

#### 4.4 Program Administration

Program administration for waste management programs funded and operated within the County fall under County jurisdiction. However, through municipal agreements some administrative services are handled by the area municipalities such as customer service and promotion and education. Another function of program administration is to track all material tonnages and perform all provincial reporting in order to receive waste diversion funding. Data management plays a significant role in managing the waste management program, monitoring performance, and assessing opportunities for improvement.

##### 4.4.1 Customer Service

The County of Oxford and each area municipality, perform Waste Management Customer Service. Municipalities are compensated for customer service efforts at a price of \$2.50 per household. With the exception of the City of Woodstock and the Township of South-West Oxford (who resolve service issues within their own municipalities), customer service calls are often placed to the area municipality, who in turn directly forward them to the County for resolution. The County then notifies the area municipalities, upon resolving the service issue.

The County is very successful in resolving service issues on the day received; very few issues are carried over to the next day. Prompt attention and good communication between the County and its curbside collection contractor has resulted in improved service delivery.

For example, in 2013 the County received 349 customer service calls. Ten percent of those calls were related to contractor performance issues. Garbage performance issues consisted of garbage bins being broken or thrown into the truck by accident, section of roads missed by a new driver, or it was a visibility issue where the driver was unable to see the set out. Recycling performance issues consisted of broken blue boxes, blue boxes going into the collection vehicle, or boxes being thrown into the ditch rather than set at the curb. The remaining 313 calls

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<sup>16</sup> GENIVAR Report Integrated Waste Management Plan

were due to resident set out issues like no bag tag, overweight set out, late set out, mixed recycling, set out placed too far from curb, and recycling set out on the wrong week.

To improve service delivery, customer service issues should be forwarded to the County's Customer Service Department. The Customer Service Representatives will forward any curbside collection issues to the County's Waste Management Division and respond to all other non-contractor related queries. Customer service issues raised by residents living in the City of Woodstock and Township of South-West Oxford should continue to be addressed by their own municipal forces.

Further insight into the delivery of waste management customer service within the County is recommended. Since the County assumed responsibility for Waste Management in 2003, there have been many changes to how customer service issues are handled. Additionally, recent technology improvements, as well as improved access to various communications tools, have assisted staff in providing prompt service delivery. The County should explore ways to improve service delivery at a higher level of efficiency.

#### 4.4.2 Promotion and Education (P&E)

Increased waste management promotion and education has been referenced throughout this report as a system improvement option. The County, the City of Woodstock, and the Township of South-West Oxford each perform their own promotion and education with reimbursement of associated expenses covered through the County's Waste Management Budget. Under WDO Best Practices, municipalities that spend \$1.00 per household on P&E tend to achieve 60% diversion of recyclable materials. Based on GENIVAR's assessment of waste management P&E in the County, \$0.84 per household is spent on P&E. To achieve best practice level an additional cost of \$0.16/household should be spent representing an additional 987 diverted tonnes.<sup>17</sup>

Prior to developing educational materials, the County should prepare a detailed communication strategy outlining the various tools and resources to be used as well as projected budgetary requirements. To reduce costs and conflicting messages, development of educational material, which can be shared between the three collection systems, is needed; this can be achieved by harmonizing the collection program (see Section 3.3). Development of this plan should be in partnership with the County's Strategic Communication and Engagement Department as well as with the City of Woodstock and Township of South-West Oxford.

#### 4.4.3 Waste Management Performance Metrics

Established performance metrics and proper data management is essential in monitoring program performance and identifying opportunities for improvement. There is no one standardized way to measure a municipality's program performance. Some municipalities have set a diversion target and measure their performance annually based on their ability to meet that target, while other municipalities prefer to measure their performance on kilogram per household for garbage and recycling, and so on.

<sup>17</sup> GENIVAR Report Integrated Waste Management Plan

The annual WDO Municipal Datacall analyzes municipal garbage and recycling data and verifies the accuracy of the data each year. This information allows municipalities to compare their performance year over year, as well as against municipalities of similar size and composition. The only issue with comparing the County's programs to another municipal program is that no one municipality is the same, nor are the programs the same.

Table 3 in this report provides information on the County residential waste generated, diverted, and disposed of on an annual basis. This table further breaks the data down by kg/capita. The 2012 metrics should be used as Oxford County's baseline, with the goal of annual improvements. As well, targets approved by County Council, should be set annually. Doing so will allow the County to develop realistic targets based on current day situation and avoid the development of unrealistic and unobtainable targets.

## 5 INDUSTRIAL, COMMERCIAL AND INSTITUTIONAL (IC&I) PROGRAMS

Municipal waste management programs geared towards the IC&I sector are not as advanced or plentiful as programs geared toward the residential sector. There are two primary reasons for this:

1. Municipalities receive provincial program funding to deliver residential waste management programs.
2. Waste management regulatory authority for the IC&I sector rests with the province, not municipal government.

Ontario municipalities vary on how they handle IC&I waste material. With regards to curbside collection, most municipalities allow participation in the curbside collection program as long as IC&I can meet the requirements of the residential program. Some municipalities have placed set out limits on the IC&I sector which are enforced by their collection by-law, while other municipalities will only service an IC&I establishment if they are located on a residential collection route.

Regarding landfill tipping fees, some municipalities have increased tipping fees for the IC&I sector or have banned IC&I generated waste completely from the municipal landfill site. Most municipalities who have pursued either of these options were faced with limited landfill capacity.

### 5.1 IC&I Growth Forecast

IC&I growth projections for Oxford County continue to be promising due to the County's geographic location and ease of access to markets. At present, the County employment on employment lands by sector are:

- 84% manufacturing;
- 4% whole sale trade;
- 3% transportation and warehousing;
- 2% construction;
- 2% utilities; and,
- 5% other<sup>18</sup>.

Future projections indicate that most of the IC&I growth will be seen in the County's three urban areas with the City of Woodstock seeing the majority of the growth (see Table 26).

<sup>18</sup> Watson & Associates Economists Ltd. – Oxford County Growth Forecast and Employment Land Study Draft

**Table 26: Proportion of 2013-2033 Employment Growth on Employment Lands by Industrial, Commercial and Institutional (IC&I) Sectors<sup>19</sup>**

Municipality	Industrial	Commercial	Institutional
Woodstock	100%	25%	10%
Ingersoll	100%	20%	10%
Tillsonburg	100%	20%	10%
Blandford-Blenheim	80%	10%	0%
East Zorra-Tavistock	80%	10%	0%
Norwich	80%	10%	0%
South-West Oxford	80%	10%	0%
Zorra	80%	10%	0%

GENIVAR’s research uncovered that an overwhelming majority of businesses are small businesses with 60% of all recorded businesses being indeterminate in nature, meaning no employees or self-employed, cottage based businesses. Of the businesses with employees, 53.8% have fewer than five employees and 75.4% have less than ten employees<sup>20</sup>.

Findings from the Watson and GENIVAR reports indicate that the IC&I sector will continue to grow within the County and this means that waste generation rates for this sector will grow as well.

## 5.2 Waste Composition

There have been no comprehensive IC&I waste characterization studies conducted in Ontario. In order to identify waste characterization in the County, GENIVAR referred to a California study to build what they thought would best represent Oxford’s IC&I generated waste (see Section 3.5 of Appendix A). The characterization of the waste streams from the various sectors has been estimated by GENIVAR to be:

**Table 27: Oxford County Proposed Waste Characterization<sup>21</sup>**

Sector	Waste Generated Consist of:
Fast Food and Restaurants	90% paper, food, and blue box materials
Offices	75% paper, food, and blue box materials
Retail Services	74% paper, food, and blue box materials
Health Care and Social Services	70% paper, food, and plastic
New Residential Construction	72% paper, drywall, clean wood, asphalt roofing, concrete and aggregates
Residential Renovation	61% paper, drywall, clean wood, asphalt roofing, concrete and aggregates
Wholesale Trade and Warehousing	48% wood and scrap metal 25% paper, food, and blue box materials

GENIVAR’s research identifies that the majority of the waste streams generated by the IC&I sector comprises of organics, paper, cardboard, and blue box materials.

<sup>19</sup> Watson & Associates Economists Ltd. – Oxford County Growth Forecast and Employment Land Study Draft

<sup>20</sup> GENVIAR Report – Integrated Waste Management Plan

<sup>21</sup> GENVIAR Report – Integrated Waste Management Plan

**5.2.1 Oxford County Waste Audits**

In 2008, the County of Oxford conducted a basic audit of IC&I waste received at the County’s Waste Management Facility. The audit was conducted over five days, randomly examining 34 incoming loads totaling 111,000 kg of waste. Table 28 identifies audit findings. Please note that the statistical validity of the study cannot be confirmed.



**Table 28: 2008 IC&I Waste Audit at the County’s Waste Management Facility**

Recyclable Materials	% of Waste
Paper Fibres	24%
Plastics	11%
Glass	0.4%
Metals	1%
Construction and Demolition	20%
<b>Total</b>	<b>56%</b>

Further examination of incoming waste from the IC&I sectors noted that commercial sector containers have a high level of cardboard contamination which is supported by the 2008 audit. Typically, waste is collected in 4, 6, and 8-yard containers. These containers often service multiple businesses making the source of the contamination difficult to identify. One of the main reasons for high cardboard contamination is that small businesses often lack a cardboard management program either due to lack of staff resource to manage the program or the perceived cost of the program.

Waste in 20- and 40-yard containers typically come from the commercial sector and have a high level of film plastic contamination. These containers generally service a single business and often come from the retail or grocery stores.

Waste coming from the industrial sector tend to contain one to two waste types including unique waste material that’s not easily recycled. Larger industrial establishments have waste management programs in place and follow the requirements of Ontario Regulation 103/94.





## 5.3 Existing IC&I Programs

### 5.3.1.1 Curbside Garbage and Recycling Collection

Businesses located on an existing residential collection route are able to participate in the program as long as they meet set out requirements:

- garbage tagged with bag tags;
- cardboard broken down and bundled;
- blue box materials separated into fibres and containers; and,
- set outs not exceeding 20 kg.

### 5.3.1.2 Construction and Demolition (C&D) Material Recycling

The County's construction and demolition recycling depot was opened in 2010 in response to the IC&I audit results uncovered from the 2008 audit. This depot operates on a cost recovery basis. The success of this depot has been very encouraging with approximately 7,000 tonnes of material being diverted annually. Recyclable materials include clean wood, shingles, glass, drywall, concrete and aggregates, scrap metal, and mix construction and demolition materials.

### 5.3.1.3 Cardboard and Blue Box Material Recycling

The outcome of the 2008 audit resulted in the County placing a 20-yard split bin at the small vehicle transfer station for the collection of blue box related materials and a 40-yard cardboard bin. Collection of these materials is free and collected tonnages have increased annually. In 2013, the County collected 34 tonnes of blue box materials and 43 tonnes of cardboard.

### 5.3.1.4 Hazardous Waste Disposal

In 2009, the County opened the Household Hazardous Waste Depot. Under the terms and conditions of the depot's Environmental Compliance Approval (ECA), the County is able to receive small quantities of hazardous waste from IC&I operations. Requirements for the receipt of hazardous and liquid industrial materials from the IC&I sector are stringent. Specifically, the frequency of collection and quantity of material accepted at the depot by an individual generator of waste is quite low. Participation in this program by the IC&I sector is quite low.

## 5.4 IC&I Programs for Consideration

Extending the life of the County's landfill site is a priority for Council. Given the emphasis placed on increasing waste diversion from the landfill, Council asked staff to further examine potential programs to support the IC&I sector.

### 5.4.1.1 Landfill Material Bans and Fines

The implementation of material bans with associated fines at the County's Waste Management Facility would be an effective way to force recyclable materials away from landfill. This initiative would be met with opposition from both the residential and IC&I sectors but would motivate behavioural change. An amendment to the County's Solid Waste Transfer and Disposal Facility By-law 4954-2008 would be required. Specifically, Schedule C of the By-law would need to be revised to identify banned materials and Schedule D of the By-law would be reviewed to determine if the fee schedule for fines is appropriate for current day enforcement.

**5.4.1.2 Increased Tipping Fees**

Many municipalities with limited life left in their landfill sites have elected to increase tipping fees for the IC&I sector. This initiative often results in the IC&I sector sending their waste material to another landfill site with lower tipping fees and does not necessarily achieve the end goal of reducing, reusing, and recycling.

A scan of tipping fees at surrounding landfill sites is listed below in Table 29. The scan shows that the County’s tipping fee is currently the most cost effective of the sites surveyed and opportunity does exist to increase landfill tipping fees while remaining within market pricing. However, it should be noted that this table does not take into consideration the potential for variable pricing at the private sector landfill sites for bulk business contracts; this information was not accessible by the County.

**Table 29: Landfill Tipping Fees**

Location	Ownership	Tipping Fee	Additional Fees
Green Lane, St. Thomas	Municipal	\$103/tonne	\$309/tonne for special handling
Ridge, Blenheim	Private	\$70/tonne	
Petrolia, Lambton	Private	\$90/tonne	\$65.50 under 500kg
Warwick, Lambton	Private	\$82/tonne	\$66.45 under 500 kg
W12A, London	Municipal	\$75/tonne	Variable pricing for 800kg or less
Tom Howe, Haldimand	Municipal	\$113/tonne	
Mohawk Street, Brantford	Municipal	\$69/tonne	\$5.00 150kg or less
Niagara Region, Niagara	Municipal	\$90/tonne	\$5 for 60kg or less
Halton Region, Milton	Municipal	\$154/tonne	Variable pricing for 150kg or less
Oxford County	Municipal	\$65.89/tonne	

**5.4.1.3 Decrease C&D Depot Tipping Fees**

At present, the C&D tipping fees are set at cost recovery and are \$65.65/tonne. Recommendations at one of the facilitated Councillors Workshops was that tipping fees for this material type should be lowered to encourage more diversion of this waste stream from the landfill.

In 2013, 6,700 tonnes of C&D material was diverted from landfill. Based on the 2008 audit it was estimated that 11,000 tonnes of C&D material is landfilled annually at the County’s facility. Decreasing the C&D tipping fee may succeed in capturing the remaining estimated tonnage.

**5.4.1.4 IC&I Waste Diversion Promotion and Education Program**

Small to medium sized businesses would be the focus of the education campaign. Most large establishments with 100 plus employees have an Environmental/Health and Safety Representative dedicated to legislative compliance and program implementation. As a result, these operations often have relatively progressive waste diversion programs in place. Smaller operations often do not have a dedicated person to monitor waste diversion activities, establish a program, or educate decision makers on the ease and potential savings of implementing a source separation program. These operations often fall under the minimum requirements of Ontario Regulation 103/94 and therefore, are not required to comply with the regulation. For

these operations, it is about making recycling as convenient and cost effective as possible. Any perceived costs associated with waste diversion will be met with opposition.

Education and routine follow-up is essential to improving waste diversion among the IC&I sector. To start, a 3Rs IC&I Discussion Group hosted by the County of Oxford could be established to promote recycling and composting among businesses. During these meetings the IC&I sector would have an opportunity to network and solve problems that other businesses may have already overcome.

As well, the education process should include a Tool Kit which could be divided into two sections, one for businesses that are starting up a program for the first time and one for those businesses wishing to maintain or improve an already existing program. The following information would be contained in the Tool Kit:

#### Development of an IC&I Waste Diversion Check List

A one-page, easy to read checklist would provide business owners with an overview of the steps that are required to put a waste diversion program in place. A check-list format is recommended in order to make the list interactive, to prompt action, and to provide the manager with a way of charting progress.

#### Development of an IC&I Waste Diversion Start-Up Workbook

A start-up workbook would expand upon the start-up checklist provided in the Tool Kit and offer more details for waste diversion program managers. Each page of the workbook would provide additional information on the steps involved in developing a waste diversion program, covering topics such as “Choosing Your Hauler”, “Selecting Your Equipment”, and “Education – How to Get the Word Out”.

#### Development of an IC&I Waste Audit Guide

Waste audits can be very useful in helping businesses identify their waste diversion needs. The tool-kit would provide information and links to on-line waste audit guides.

#### Development of Signage

Well-designed signage is very useful in promoting waste diversion systems, prompting desired behaviours (such as sorting waste materials correctly), and fostering a waste diversion culture in the workplace. The signage could be provided by the County in hard copy, electronically for printing by the business, or both. A list of possible signage is described below:

- Bin signage: colourful, easy to read bin labels could be provided. Program managers would be able to print them out and laminate them as per their own requirements.
- Promotional signage: signage could be developed that promotes to both staff and customers that the business recycles and composts in Oxford County. This type of signage can provide public acknowledgement and recognition of the business' waste

diversion efforts, and foster a culture of waste diversion in the workplace specifically and among businesses generally.

#### List of Web Resources

The internet can provide a wealth of information on waste diversion that would be useful for the different business sectors of the County. However, the internet is very large and most businesses, particularly the small ones do not have the resources to spend on internet searches for these materials. The County of Oxford could provide a section on their website dedicated to assist the IC&I sector. It could contain FAQs and links to online documents and resources that provide useful waste diversion information for businesses in general or for sectors in particular.

#### Development of IC&I Sector-Based Tip Sheets

The waste diversion needs and challenges of business sectors can differ greatly from one another. Sector-based tip sheets could provide useful ideas to program managers that relate directly to those businesses.

#### Development of IC&I Information Sheet on the Recycling and Composting Process

A poster or fact-sheet could be provided to businesses that shows them what happens to their waste once it leaves their site. The information could be provided on a web-page, as a fact sheet, as a poster, or in any combination of the three. One advantage of providing the information in a poster format is that it can then be posted at businesses and be used by the business to further promote their program among their staff. This information would reassure managers and staff that their efforts are being realized and are contributing to the protection of the environment.

#### Site Visits

The County could perform site visits to businesses to provide advice on how to start or improve their waste diversion program. The County could also conduct waste seminars or offer advice for example on what type of bins they should be using and where to store them. Scheduled site visits would show the County is willing to work with businesses, as opposed to a heavy-handed regulator. This could contribute to additional goodwill from business and promote an atmosphere of co-operation.

### **5.4.2 Impact on Waste Management Facility and Waste Management Budget**

Implementation of the options discussed in Section 5.4 will affect both the Waste Management Budget and operations at the County's Waste Management Facility. Material bans and increased tipping fees will result in further IC&I waste being sent outside of the County to landfill sites offering volume discounts. This trend is already being noticed by the County as tipping fees increased from \$45/tonne in 2007 to \$65.89/tonne in 2014.

As a result of increased tipping fees the County has noticed a significant decrease in the annual tonnage received at the Waste Management Facility. Part of the tonnage decrease can be attributed to waste diversion efforts and business closures, but a good portion of the tonnage

decrease is due to waste materials leaving the County. Private sector companies like BFI and Waste Management have indicated to Waste Management staff that more cost effective disposal options are available to them. Should the County choose to increase tipping fees, reduced tipping fee revenues can be expected due to less material being landfilled. As well, tipping fee disposal costs will increase for the County for curbside collection programs.

As identified in Section 2.3, the County performed an efficiency assessment of the Waste Management Facility. By streamlining operations, the County was able to find operational savings, decreasing the baseline operational cost for the facility to \$1.7 million annually. If tipping fees are increased to deter IC&I waste from coming to the County's facility, appropriate decisions will need to be made regarding the operation of non-revenue generating programs should revenue fall below the baseline operational cost for the facility.

## 6 PROPOSED SYSTEM IMPROVEMENT OPTIONS

Sections Three, Four, and Five of this document assessed program operations and service delivery, looking at their current state of affairs and future programming needs. Contained within this section are the proposed system improvement options that if implemented, may enhance program performance and improve cost efficiencies.

The proposed system improvement options were developed from the analysis and discussion contained in the earlier sections. The options have been further separated by level of approval/insight required:

The public engagement process was completed in May and June of 2014. Details of the engagement process can be found in Section 2.3 and Appendices E, F, and G.

- Public Engagement - System Improvement Options requiring public consultation to determine if the County should proceed with implementation.
  
- County Council - System Improvement Options requiring County Council approval prior to implementation.
  
- Operational - System Improvement Options, which are operational in nature, to be implemented by staff as a form of ongoing program/service enhancement activities. Should proposed expenditures exceed current budget comments then the initiative will be referred to Council for approval.

System Improvement Option for Renaming the Landfill Site	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Rename the Oxford County Landfill Site : The Oxford County Waste Management Facility</b>  <i>Refer to Section 2.3</i>		No Impact		✓	
<p>The operational landscape at the County’s landfill site has changed substantially over the years. Landfill operations represent only portion of the daily activities at the facility. The name of the facility should change to reflect day-to-day operations and communicate that it does more than just landfill waste.</p>					



System Improvement Option for the Bag Tag Program	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Development of a Bag Tag Vendor Kit</b> <i>Refer to Section 3.2.3</i>	\$2,000 annually	No Impact			✓

The County should develop a Bag Tag Vendor Kit for distribution to all of the current vendors and new vendors upon registration. The Kit will serve three functions:

- i. A reminder to current vendors of the program’s policies, procedures, and service level expectations.
- ii. To familiarize new vendors with the program’s policies, procedures, service level expectations.
- iii. To formalize the County’s policies, procedures, and service level expectations.

The Kit should include a copy of the signed Vendor Agreement, ordering and payment policies, program guidelines, and a County issued Bag Tag Vendor Sign. Existing Vendors should receive an annual newsletter that reviews program requirements, County contact information, etc.

System Improvement Option for the Bag Tag Program	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Amend the Current Fees and Charges By-law 4889-2007</b> <i>Refer to Sections 3.2.4 and 3.4</i>	No Impact	Marginal Impact		✓	

The County should amend By-law 4889-2007 in order to provide residents with clarity on program requirements. For example the By-law should:

- include the ability to place set outs at the curb that have been affixed with a County bag tag which are securely bound (not in a bag), no longer than 96 cm, and weigh no more than 20 kg;
- clearly define that three bag tags per container applies only to the use of Herbie Curbies in the City of Woodstock, and that the use of Herbie Curbies between December 15<sup>th</sup> and March 15<sup>th</sup> is not allowed;
- identify that both ends of the bag tag must be visible to receive collection;
- identify that broken or ripped tags will not be accepted; and,
- clearly state that when using containers:

- waste material must be placed inside a garbage bag (loose material will not be accepted);
- that the weight of the entire set out cannot exceed 20 kg;
- that the height of the waste material should not exceed the height of the container; and,
- the proper number of bag tags must be applied to the top bag inside the container.

System Improvement Option for the Bag Tag Program	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Increase Curbside Education and Awareness</b> <i>Refer to Sections 3.2.4 and 3.4</i>	(\$67,000) annually	716			✓

Based on several curbside set out audits conducted by the County, annual bag tag revenue loss is estimated at \$100,000 to \$120,000. A portion of the duties assigned to the Waste Management Compost/Collections Operator is to monitor the level of program compliance on collection day. The County should assess both the collection contractor’s performance in following program requirements as well as assess residential set outs for weight and containing the proper number of bag tags. The educational program will consist of no collection if set outs do not contain a County bag tag, to friendly reminders (either verbal or notices left behind) regarding weight restrictions, container requirements, and information on acceptable materials.

Use of a warning system will provide residents with advanced notice of issues without having their set outs missed for collection. Repeat offences, as determined by the Waste Management Compost/Collections Operator, will result in no collection of material.

Anticipated program savings are associated with increased bag tag compliance. Program expenses are estimated as marginal given that part of the Waste Management Compost/Collection Operator position is dedicated to curbside promotion and education, of which associated expenses have already been incorporated into the Waste Management Budget. Tonnage estimates under this scenario were provided by GENIVAR.

System Improvement Option for the Bag Tag Program	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Bag Tag Pricing Sustainability Program</b> <i>Refer to Section 3.2.5</i>	Up to (\$80,000) annually	Marginal Impact		✓	

During the 2014 Budget process, Council approved a bag tag price increase from \$1.50 per tag to \$2.00 per tag. This increase brought the price of the County’s bag tag in-line with bag tag

pricing in other municipalities. As well, this price increase has decreased the variance between bag tag revenue and curbside collection costs.

Moving forward the County should determine to what extent, bag tag revenues should cover:

- a portion of garbage collection and disposal costs. If only a portion of program costs are to be covered by the bag revenue, then the next question to be asked is whether bag tag pricing should remain at the current \$2.00 per tag, or increase annually by \$0.05. An annual \$0.05 increase would address inflationary increases observed through the curbside collection contract and tipping fees. At a \$0.05 increase, the County would see an overall revenue increase of \$80,000 annually.
- all curbside garbage collection and disposal costs. Doing this would mean that bag tags would need to increase to \$2.35.
- all waste management costs. Doing this would mean that bag tags would need to increase to \$3.13 by 2018.

For a detailed bag tag sensitivity analysis please refer to Oxford County Council Report, PW 2013-67 Bag Tag Fee Schedule, presented to County Council on November 18, 2013.

Council Report, PW 2013-67 Bag Tag Fee Schedule, identified that under 2012 status quo conditions, bag tag fees would have to increase to a minimum of \$2.19 per tag to remove 100% of the costs associated with curbside garbage collection and disposal from the levy. During the November 18, 2013 meeting of County Council, the bag tag price was increased to \$2.00 per tag. Once contract pricing for curbside garbage and large article collection has been confirmed, staff will present Council with a Bag Tag Sustainability Plan for consideration.

System Improvement Option for Garbage and Recycling Contract Procurement Process	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Garbage and Recycling Contract Procurement Process</b>	(\$750,000) Annually	876		✓	
<i>Refer to Sections 3.3.3, 3.3.3.1, 3.3.3.2, 3.3.3.4, 3.3.3.5</i>	<i>To be confirmed by bid process</i>				

System Improvement Options for:

- Curbside Routing Efficiency, Sections 3.3.3 and 3.3.3.1
- Six Day Garbage and Recycling Collection System, Sections 3.3.3 and 3.3.3.2
- Tender Co-Collection of Garbage and Recycling with Dual and Single Stream Recycling Options, Sections 3.3.3.3 and 3.3.3.4
- Tender a Seven Year Curbside Collection Contract, Section 3.3.3.5
- Tender a Seven Year Dual and Single Stream Recycling Processing Contract, Section 3.7 have been consolidated into one System Improvement Option.

Through the upcoming procurement process the County should obtain pricing for:

- Weekly garbage collection and bi-weekly recycling collection; pricing both single stream and two stream recycling.
- Weekly garbage collection and weekly recycling collection; pricing standard collection with two stream recycling and co-collection with single stream recycling.
- Six day garbage and recycling collection; pricing standard collection with two stream recycling and co-collection with single stream recycling.
- Provide contractors with the option to provide pricing for an alternative collection system.
- Develop new curbside collection routes through contract pricing to maximize labour and equipment usage for each collection day.
- Increase the term of the curbside collection and recycling processing contracts from five years to seven years with the option to extend for one additional year under the same contract terms and conditions.

System Improvement Option for Curbside Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Curbside Routing Efficiency</b>	(\$120,000) annually	Marginal Impact		✓	
<i>Refer to Sections 3.3.3 and 3.3.3.1</i>	<i>To be confirmed by bid process</i>				

*This System Improvement Option has been consolidated into System Improvement Option Garbage and Recycling Contract Procurement Process*

Section 3.3.3.1 identifies that routing imbalances occur under the County collection contract resulting in equipment and labour being under utilized on certain days of the week. While the City of Woodstock and the Township of South-West Oxford have less of a discrepancy with routes, garbage vehicle tonnages and arrival times at the County’s landfill site identify that equipment and labour are not being maximized.

To lower overall program costs without affecting service delivery, opportunities for improved routing efficiencies and better equipment and labour usage within the three curbside collection areas (County, City of Woodstock, and Township of South-West Oxford) should be explored. It is expected that undergoing this exercise will result in a decrease in the number of collection vehicles required to carry out curbside collection. This may also mean extending the collection boundaries for the City of Woodstock and the Township South-West Oxford to maximize efficiencies within their programs.

It would be advisable to work with a third party, possessing expertise in both curbside collection routing and equipment usage to identify appropriate routes and equipment needed to preform collection as efficiently as possible.

System Improvement Option for Curbside Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Six Day Garbage and Recycling Collection System</b>	(\$300,000) annually	365 annually	✓		
<i>Refer to Sections 3.3.3 and 3.3.3.2</i>	<i>To be confirmed by bid process</i>				

*This System Improvement Option has been consolidated into System Improvement Option Garbage and Recycling Contract Procurement Process*

Section 3.3.3.2 identifies that collection frequency analysis was undertaken to assess the impact on service delivery and program costs if curbside collection within the entire County moved to a four, five, or six day collection cycle. Within the analysis, the following frequency of garbage and recycling collection was examined with routing efficiencies taken into consideration:

- a 4 day collection with weekly garbage collection and bi-weekly two stream recycling collection;
- bi-weekly garbage collection in rural areas, weekly garbage collection in urban areas, with bi-weekly dual recycling collection for all areas;
- a 6 day collection system with same day garbage and two stream recycling collection; and,
- a 6 day co-collection system with same day garbage and single stream recycling.

The most cost efficient collection cycle was the six day garbage and recycling collection with single stream co-collection, achieving at a minimum between 10-15% savings. Under this scenario savings were identified by assessing the current five day collection cycle for garbage and 10 day collection cycle for recycling, using separate collection vehicles for each material stream. The savings associated with this scenario represents potential efficiencies through the reduction in vehicles and associated costs.

Further analysis identified that the benefits of this scenario extended beyond costs. Under this scenario:

- Residents would receive 42 collections per year. This number of collections is in line with the average number of garbage bags per household placed at the curb each year.
- Recycling frequency will increase from a 10 day cycle to a 6 day cycle. This increase in recycling collection frequency may aid in increasing the amount of blue box material captured through the program. Studies have shown that more frequent blue box collection yields higher capture rates resulting in less recyclables, making their way into the waste stream.

- Reducing the number of collections per year by 10 will reduce the amount of greenhouse gas emissions generated by the collection vehicles. This system would reduce the number of trucks required to perform collection, thus reducing the amount of mileage travelled by the collection vehicles each year.
- Elimination of Saturday collection, which historically has low material volumes and results in stressed collection days on the next regularly, scheduled collection due to increased material volumes.

Implementation of a 6 day collection cycle would mean that collection would not occur on the same day each week. The City of London has made this collection system work in a municipality with a population of 366,000. The success of this program is largely due to resident’s relying on the City’s Garbage and Recycling Calendar and use of a Municipal Waste App program, which sends garbage and recycling information to email and smartphones.

Implementation of this collection cycle would require substantial promotion and education before and during the launch of the system. Working with the County’s Communication Department, advanced planning will enable the County to promote this system through local media, mailing notices, etc.

The potential savings under this program cannot be disputed and the City of London has demonstrated that this system can work.

System Improvement Option for Curbside Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Purchase My-Waste App Software</b> <i>Refer to Section 3.3.3</i>	\$5,000 annually	No Impact			✓

As smartphone usage continues to increase, more individuals are relying on the use of these phones for daily information. In response to this demand, municipalities are moving towards conveying services and program information through the use of waste app software.

One of the most popular App software on the market, known as My-Waste App is being utilized by several municipalities in Ontario with success. This particular software not only sends program and service information to email and smartphones, but also provides customizable web site service, which can be uploaded to municipal websites to make it easier to access information on waste management programs and services. The My-Waste App was designed with an additional feature which includes a waste database that informs users how and where to safely disposal or recycle materials in their community.

Also, should the County proceed with a 6 day curbside collection system, this software will be a valuable tool to assist residents in identifying when it is their collection day.



System Improvement Option for Curbside Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Tender Co-Collection of Garbage and Recycling with Dual and Single Stream Recycling Options</b>	(\$400,000) annually	511		✓	
<i>Refer to Sections 3.3.3.3 and 3.3.3.4</i>	<i>To be confirmed by bid process</i>				

*This System Improvement Option has been consolidated into System Improvement Option Garbage and Recycling Contract Procurement Process*

The co-collection of curbside materials is when two collection vehicles (waste and recycling) are replaced with one vehicle. Assuming that the garbage to recyclable material ratio is no more than 2:1, and the landfill site and recycling processing facility/transfer station is within close proximity to on another, then co-collection of materials is a cost effective option that should be considered by the County.

According to garbage and recycling material tonnages for County, Township of South-West Oxford, and City of Woodstock all have a garbage to recycling ratio of 2:1, making co-collection a viable option for all three systems. The County should enter into discussions with the City and Township about whether any opportunities exist to assess co-collection within their respective collection areas.

During the upcoming bid process, two stream and single stream recycling should be evaluated. Under a two stream system, collection vehicles would require three compartments, one for garbage, one for containers, and one for fibres. In a single stream system, the collection vehicle would only require two compartments, one for garbage, and the other for recyclables (containers and fibres mixed together). Under this scenario, annual operating savings is expected to be approximately \$400,000 due to the reduction in equipment and associated costs, and the implementation of single stream recycling. Less savings will be scene if two stream recycling is maintained. Lastly, further savings would be seen should this option be combined with a six day collection cycle.

It should also be noted, that the tonnage impact associated with this option is due to the implementation of single stream recycling. Studies show that single stream recycling not only offers the potential for more efficient collection costs, but this system has demonstrated a 7% increase in blue box material capture rate can be achieved.

System Improvement Option for Curbside Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Tender Seven Year Curbside Collection</b>  <i>Refer to Section 3.3.3.5</i>	(\$130,000) annually  <i>To be confirmed by bid process</i>	No Impact		✓	

*This System Improvement Option has been consolidated into System Improvement Option Garbage and Recycling Contract Procurement Process*

The length of curbside collection contracts have increased from the standard five years to seven or ten years. Given the County’s vast geography and terrain, the maximum life expectancy of collection vehicles used in the Oxford County collection contract is expected to be seven years.

During the tender process, pre-qualification of collectors is encouraged and contract language around the appearance of vehicles, with repainting during mid-contract will be specified.

System Improvement Option for Curbside Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Identify Local Transfer Station Options</b>  <i>Refer to Section 3.3.3.6</i>	(\$78,000) annually  <i>To be confirmed by bid process</i>	No Impact		✓	

Under the County’s current collection contract, curbside collected blue box materials are taken to a recycling processing facility in Brantford on a daily basis through direct haul. Area recycling processing facilities located within close proximity to the County are at a minimum, 40 to 60 minutes away. While Section 3.3.3.3 speaks to the direct haul of recyclables using curbside collection vehicles to the processing facility is the most efficient when travel times are less than 90 minutes, this service adds an additional \$78,000 annually to program costs. In addition, during certain times of the year, increased material volumes occur and result in collection vehicles having to empty their load part way through the day and return to the route to complete collection. The time required to off load recyclable materials in the middle of the route results in an additional 90 minutes on non-productive collection time, causing service delays.

The City of Woodstock and the Township of South-West Oxford take their collected curbside collected recyclables to the City’s transfer station located at the City’s Works Yard off James Street. Opportunities exist for the County and the City to enter into an agreement where the County could take their recyclable materials to the City’s transfer station. This option would eliminate any additional travel costs associated with the direct haul of material to a recycling processing facility under the County’s contract. This option would also decrease the amount of non-productive collection time associated with mid-day off loading of materials. Pursuing this option would mean an increase in material transportation costs incurred to move stored material

from the City’s transfer station to a processing facility, however, sourcing out a processing facility in close proximity to the County would minimize costs those transportation costs.

A preliminary assessment of the City’s transfer station by GENIVAR concluded that the City’s facility should be able to accept the County’s curbside collected material. Should additional storage capacity be required or expansion be deem necessary, GENIVAR estimates that renovation costs would be somewhere in the range of \$100,000 on top of annual operating costs.

Another option for consideration is for the County to construct a curbside collection transfer station at the landfill site. This transfer station would consist of a coverall with concrete pad and bunker(s) large enough to store a week’s worth of collected material. It is anticipated that additional staff and equipment resources would not be required given current staffing and equipment levels. At an estimated one time investment of \$200,000, plus an annual operating cost of \$45,000 would be required. This option would prove to be very viable for County and Township of South-West Oxford collection should the co-collection of material be undertaken. As expressed in Section 3.3.3.3 having a recycling transfer station/processing facility in close proximity to the landfill site is important when considering co-collection. The collection contract can be established to obtain pricing based on both options.

Once the type and frequency of collection is decided, an assessment using collection bids can be undertaken to determine which transfer station option would be most viable and cost effective.

Based on the outcome of the upcoming procurement process for curbside collection, staff will make a recommendation to County Council as to whether a transfer station should be built at the County Waste Management Facility.

System Improvement Option for Curbside Program Compliance	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Development of Curbside Set Out Promotion and Educational Material</b> <i>Refer to Sections 3.1.1, 3.2.1, 3.2.4, 3.4, and 4.4.2</i>	\$10,000 annually	987			✓

Curbside audits and waste and recycling audits have identified program compliance issues with

- the bag tag program resulting in lost revenue;
- contaminated blue box set outs where over recycling occurs;
- missed collections caused by residential set out issues; and,
- recyclable materials being placed in the garbage stream.

Increased promotion and education of the various curbside programs is needed to decrease the amount of compliance issues present. Working with the County’s Communication Department, standardized promotion and education material can be developed through input obtained from the County, City of Woodstock, and the Township of South-West Oxford. To maximize program effectiveness, decrease resident program confusion, and minimize costs, standardized program delivery across the County is required.

Costs associated with this scenario would be for material production only. Costs associated with the disbursement of the materials would be covered under the Increase Curbside Education and Awareness System Improvement Option. Tonnage impact under this scenario were provided by GENIVAR.

System Improvement Option for Curbside Program Compliance	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Develop a Standardized Curbside Collection By-law for Implementation by all Eight Municipalities</b>	No Impact	716		✓	
<i>Refer to Section 3.4</i>					

Program enforcement is difficult without a By-law to enforce and information contained in Section 3.4 identifies that curbside compliance is problematic. Given that curbside collection falls under the jurisdiction of area municipalities, the County should develop a standardize curbside collection By-law in consultation with the area municipalities. Again, standardization of program delivery and program enforcement will improve collection efficiencies, service delivery, and reduce resident program confusion.

System Improvement Option for Increased Blue Box Capture Rate	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Provide One New Blue Box to Residents in 2015</b>	\$500,000 one time	644	✓		
<i>Refer to Sections 3.1.1, 3.2.1, 3.2.4, 3.4, and 3.5</i>	<i>To be confirmed by bid process</i>				

**System Improvement Option Removed - The results of the public engagement process identified that the residents of Oxford County did not support this System Improvement Option.**

GENIVAR’s assessment of the County’s blue box program concluded that 49% of available blue box materials are not being recovered. Frequency of collection and type of collection (two stream vs. single stream) will improve blue box capture rate, which have been addressed in this report. Another factor, which will increase blue box capture rate, is to provide residents with an

additional collection bin for the storage of recyclable materials between collections. Studies undertaken to assess capture rate in municipalities that provide additional blue boxes have shown an increase in the recycling capture rate by an average of 9%. Within Oxford County, 9% equates to an additional 644 tonnes annually.

One time costs associated with this initiative would be the purchase and distribution of one new blue box to every household in the County receiving curbside collection. Execution of this initiative will be dependent on the type of curbside collection program in place. The collection contractor would distribute boxes or an independent contractor would be sourced to deliver this service. Additional promotion and educational material would also be affixed to the blue boxes to promote any program changes and program compliance issues. Lastly, distribution of the blue boxes would occur prior to the start of the new curbside collection contract set for April 1, 2015.

System Improvement Option for Large Article Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Implement a User-Pay System for Large Article Collection</b>	(\$440,000) Annually	450	✓		
<i>Refer to Section 3.6</i>	<i>To be confirmed by bid process</i>				

Section 3.6 explains the four large article collection programs operating within the County, costs and tonnages associated with each of the programs, and associated program compliance issues. Under the current system, larger article collection is performed outside of the user-pay program established for weekly curbside collection. Program abuse and lack of a standardized program across the County has created program deficiencies costly to the County. It is therefore recommended that a use-pay system be implemented for large article collection. Options for a user-pay system included:

- Discontinuing curbside collection of large articles, requiring residents to bring their large items to the landfill site; and,
- Implementation of a pay for use curbside system, where residents are required call into the County to arrange service delivery through the curbside collection contractor. Doing this would require specific language in the curbside collection tender documents so that accurate service pricing could be received. The estimated savings associated with implementing a user-pay program for large article collection would be approximately \$440,000 annually, which is the current cost to deliver the program, plus the anticipated increase in bag tag revenue received for non-compliant garbage set outs. The tonnage impact is estimated at 450 tonnes which represents approximately 25% of the material set out at the curb to be recyclable.

Results of the public engagement process identified that this System Improvement Option as written above, would not be supported by the residents of Oxford County. Instead, it is recommended that this System Improvement Option be re-written to reflect the following:

1. Implement a user pay system for large article collection.
2. Obtain contractor bid pricing for the following options:
  - a. Large article collection once per year per municipality
  - b. Large article collection twice per year per municipality
  - c. Large article collection based on a call in service
3. Promote residents bringing their large articles to the landfill site for disposal.

System Improvement Option for Recycling Processing	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Tender a Seven Year Dual and Single Stream Recycling Processing Contract</b>	\$200,000 Annually	Impact captured under Dual and Single Stream Recycling Options		✓	
<i>Refer to Section 3.7</i>	<i>To be confirmed by bid process</i>				

*This System Improvement Option has been consolidated into System Improvement Option Garbage and Recycling Contract Procurement Process*

Industry studies have shown that two stream recycling has a lower blue box material capture rate, less product contamination, higher curbside collection costs, and lower processing costs. Single stream recycling has proven to increase blue box capture rates, have higher levels of product contamination, lower collection costs, and higher processing costs.

In order to assess the most efficient and cost effective curbside side collection and recycling processing program for the County, both collection and processing contracts need to be aligned with one another. Additionally, execution of a proper tendering process, following the County's Purchasing Policy will not only meet WDO Best Practices but will clearly identify which combine system (collection and processing) will yield the highest capture rate at the lowest cost to tax payers. Under this scenario the associated with costs pertain to single stream processing costs.

System Improvement Option for Brush, Leaf, and Yard Waste Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Re-launch the County's Backyard Composting Program</b>	\$135,000 one time	250	✓		
<i>Refer to Sections 4.1 and 4.1.5</i>	<i>To be confirmed by bid process</i>				

Re-launching of the back-yard composting program would consist of the development of promotion and educational material, program advertising, bulk purchase of back-yard composters, and distribution of bins. Assuming that 2,500 composters are purchased at \$10/unit



at 100 kg per composter, the County can expect to divert 250,000 kg or 250 tonnes of kitchen waste annually from landfill. As the program matures, additional diverted tonnes can be expected.

To decrease the unit price of home composters, the County should pursue the bulk purchase of home composters for all eight municipalities. As well, area municipalities such as the Town of Alymer, Elgin County, Thames Centre, and the City of St. Thomas should be approached to gauge interest levels in participating in the tender.

Home composters should be sold at the same unit price across the County. This can be achieved through the bulk purchase of the composters. Consistent unit pricing and standardized product will increase customer satisfaction and improve program delivery throughout the County.

All eight municipalities should stock composters for retail. To assist municipalities with storage space issues, the County can commit to monthly deliveries of composters in conjunction with blue boxes. Access to home composters will be more convenient for residents if all eight municipalities commit to being a point of sale for the units.

Uniformity and consistency in educational material is essential when promoting the ease of home composting. Working with the County's Communication Department, the development of 'How To Compost Information Sheets' that can be downloaded from the County's website as well as any of the eight area municipal websites. Increased newspaper and radio advertisements should be considered to raise awareness and remind residents of the benefits of home composting. Lastly, a 'How to Compost' presentation kit should be developed which will enable staff to deliver informative information sessions with consistent messaging. The presentation kit would include presentation materials, handouts, and displays.

System Improvement Option for Brush, Leaf, and Yard Waste Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Develop and Distribute a Standard Operating Procedure for the Operation of the Municipal Brush, Leaf, and Yard Waste Depots</b>	\$5,000 one time	No Impact			✓
<i>Refer to Section 4.2</i>					

The County should develop and distribute a standard operating procedure (SOP) for the use by the area municipalities in the operation of the Municipal Brush, Leaf, and Yard Waste Depots. The purpose of the SOP would be to identify environmental and health and safety regulatory requirements, as well as best practices for site management to reduce the amount of illegal dumping. The SOP would also identify appropriate signage, required safety checks, and highlight safety requirements for public spaces.

System Improvement Option for Brush, Leaf, and Yard Waste Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Perform Operational and Cost Efficiency Analysis on Municipal Brush, Leaf, and Yard Waste Depots</b>	(\$100,000) annually	No Impact			✓
<i>Refer to Section 4.2</i>					

With municipal depot operating costs varying as much as \$10/tonne and material transportation costs averaging \$200,000 annually, the County should consider obtaining tender pricing for these services and/or work with the area municipalities to lower operating costs. Obtaining bid pricing would not be out of line, as several municipal depots are operated by private contractors and almost all transportation of material is conducted independent trucking companies. The issue with transportation costs is the need to use suitable equipment to achieve cost efficiencies. Through a competitive bid process, transportation providers can be selected based on cost and equipment to be used. Should the County wish to consider tendering these services, then language could be included in the upcoming curbside collection tender. The estimated costs associated with this system improvement option pertain to implementing a standardize cost per tonne to maintain the depots while lowering transportation cost by using more suitable equipment.

System Improvement Option for Special Waste Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Discontinue Scrap Metal Depots and Decrease the Number of Special Waste Collection Events</b>	(\$25,000) annually	No Impact		✓	
<i>Refer to Section 4.3.1 and 4.3.2</i>					

Due to low material tonnages, the County should consider discontinuing the operation of the annual Scrap Metal Depots. Since 2004 when the depots were first organized, depot tonnages have dropped by 33 tonnes, collecting only 3.5 tonnes in 2013 over five depots. Given that alternative collections outlets are offered at the Special Waste Collection Events, the County's landfill site, and through private scrap metal dealers, removal of these depots would improve program effectiveness.

The decline in material weights collected at the Special Waste Collection Events also support decreasing the amount of events offered. Consideration should be given to offering the Tillsonburg and Ingersoll events on a bi-yearly basis, with discontinuation of the Woodstock fall event. Since 2010 collected material tonnages at the events has dropped by 28 tonnes, only collecting 24% of the material collected at the County's transfer station located at the landfill site. The Woodstock Spring Collection event tonnage remains unchanged over the years while all other collection sites have suffered a notable decrease in collected material tonnages.

As the cost associated with the collection of hazardous waste, tires, electronics are covered by Stewardship Programs, the financial impact associated with this option pertains to labour, advertising, and supplies.

System Improvement Option for the Special Waste Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Explore Partnership Opportunities with Not-For-Profit Agencies</b>	No Impact	400		✓	
<i>Refer to Section 4.3.4</i>					
County staff to initiate discussions with local Not-for-Profit agencies interested in collaborating on waste diversion activities within the County. Draft partnership agreements to be brought forward to County Council for approval.					

System Improvement Option for Special Waste Collection	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Obtain Public Input on Community Recycling Centres (CRCs) and Exploring Partnership with Not-For-Profit Agencies for Collection</b>	\$2,000,000 one time \$300,000 annually	400		✓	
<i>Refer to Section 4.3.4</i>					

This System Improvement Option has been replaced with ‘System Improvement Option Explore Partnership Opportunities with Not-For-Profit Agencies’.

Section 4.3.4 identifies that many municipalities operate CRCs instead of offering collection events. However, studies show that the performance of CRCs only diverts 1% more material on an annual basis. The costs associated with this initiative were identified by GENIVR based on operating costs associated with other municipal CRCs. Given the estimated costs to operate the CRCs, the 1% return on investment does not appear to be effective or efficient.

However, for those residents living more than 20 minutes from the County's landfill site, having access to CRC that is closer to them than the landfill site may be deemed a desirable service. Therefore, the County should explore the value in establishing partnerships with not-for-profit organizations like the ReStore, Goodwill Industries, and the Fusion Youth Centre. Working with these organizations and others may provide viable CRC alternatives in various locations throughout the County without incurring the operating cost associated with constructing and operating a stand alone CRC.

System Improvement Option for Established Performance Metrics	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Development of Established Performance Metrics for Monitoring and Measurement of Program Performance</b>	No Impact	No Impact			✓
<i>Refer to Section 4.4.3</i>					

WDO Municipal Datacall data for 2012 as presented in Table 3 of Section 4.4.3, should be used as baseline data for the County to measure overall residential waste diversion program performance. Performance targets should be established annually as approved by Council, taking into consideration the performance of the previous years, based line data, and current day issues affecting program delivery.

System Improvement Option for IC&I Waste Diversion	Financial Impact (savings)	Tonnage Impact	Public Engagement	Council Approval	Operational
<b>Implementation of Landfill Material Bans and an IC&amp;I Waste Diversion Promotion and Education Program</b>	\$200,000 one time \$80,000 annually	3,400		✓	
<i>Refer to Section 5</i>					

To move towards a sustainable community, one that can adequately manage waste generated within its borders and provide viable diversion options, the County should consider implementing landfill material bans and an IC&I waste diversion and promotion and education program. Under landfill bans, the County should amend the Solid Waste Transfer and Disposal Facility, By-law 4954-2008 to specify material bans associated with blue box materials (including cardboard), construction and demolition materials, tires, electronics, and scrap metal. Excluding construction and demolition materials, all other recommended material bans would be supported by an associated free recycling program at the landfill site. Construction and demolition material recycling does not receive any provincial funding and presently operates on a cost recovery basis.

Based on historical waste audits, it is anticipated that there is an additional 3,400 tonnes of recyclable material to be removed from IC&I waste loads. To capture this tonnage the County should implement an IC&I Waste Diversion Promotion and Education Program consisting of the development of an IC&I Educational Tool Kit. This tool kit would be available to all businesses but the target audience would be the small business sector with 20 – 100 employees. The Kit would consist of a waste diversion check list that businesses could reference to identify their need for a waste diversion program. A Start-Up Workbook on how to set up a waste diversion program, a Waste Audit Guide, and access to professionally designed signage and educational materials would be included in the Kit.

An undertaking of this magnitude would require the hiring of a full-time IC&I Promotion and Educational Coordinator who would be responsible for the development and distribution of the Tool Kit among the small business sector. Additionally, follow-up meetings with targeted businesses either one-on-one or through a discussion group would be expected, and routine waste audits of incoming IC&I waste loads at the landfill site would be required.

## 7 CONCLUSION

Overall, the County of Oxford has very progressive and well developed waste management programs in place for both the residential and IC&I sectors. Residential diversion tonnages indicate that these programs perform well against municipal programs across the province. The performance of IC&I programs is more difficult to quantify as it is unknown how much waste is being generated by this sector, that is not handled by the County.

Report findings indicate there is much to be gained through consolidation and standardization of programs. As a result, a number of System Improvement Options have been recommended in this report for consideration by County Council and for Public Engagement. For ease of review, the System Improvement Options are located in Section 6 of this document and reference the associated document section(s). It should be noted, that where possible, the County has tried to quantify the financial and tonnage impact of each option. However, not all improvement options are quantifiable; but rather, their merits are based on steps required to achieve program streamlining, consolidation, and standardization of operations which ultimately affect costs and tonnages.

Lastly, staff recommend that a Waste Management Communication Plan be developed to help facilitate the successful implementation of the above noted System Improvement Options.



**APPENDIX A – GENIVAR Report – Oxford County Integrated Waste  
Management Plan**

**Oxford County Integrated Waste  
Management Plan  
MA-111-25582-00**

**Draft Interim Report  
December 2012**

Prepared for:  
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## Executive Summary

In December 2011 Oxford County engaged GENIVAR Inc to lead the development of an Integrated Waste Management Plan (IWMP). The components of the plan were to include a review of the current waste management system, an examination of future needs, and the development of waste diversion strategies and alternative systems to be applied in the near and longer term to meet these identified needs. The IWMP is guided by the basic principle that the scope of study pertains to waste management programs operating within the County that are financed by the County. This allowed the study team to focus on feasible actions that can be directly implemented by the County.

The IWMP consists of the following key sections:

- Oxford County's Solid Waste Management System
- Future State and Waste Generation Estimates
- Alternative Waste Management Systems and Waste Diversion Strategy
- Evaluation of Options and Recommendations
- Stakeholder Consultation
- Strategies, Impacts & Program Considerations

These sections are summarized below:

### Oxford County's Solid Waste Management System

The objective of the IWMP is to identify the existing current state, determine the desired future state, and provide guidance on how to get there. This section, which provides an analysis of the current operation and performance, is the first critical step in the process.

Using data from both the County and Waste Diversion Ontario (WDO), some key observations are made. Based on residential waste flows for the County, the current diversion rate is 54%. This demonstrates reasonably strong diversion performance: while progressive municipalities are now approaching 60% or more, many report levels under 40%.

As part of the research phase the study team also reviewed Blue Box recycling information from four municipalities, using data generated by annual municipal submissions to WDO. The four comparator municipalities were selected for characteristics thought to be representative of the County's demographics. Based on an overall comparison (as the County reporting includes South West Oxford and Woodstock), findings revealed that the County provides recycling services at a competitively low cost per tonne and low cost per household with a recycling recovery rate that is just slightly below that of those used in the comparison. This annual figure of 0.14 tonnes per household, however, demonstrates that the County is not far removed from the curbside recycling recovery of the other municipal programs, the highest of which is 0.17 tonnes per household.

Based on the information available and the experience of the project team in the field, Oxford County operates existing programs in an efficient and cost-conscious manner. At the same time, the comparisons show that there are opportunities to increase diversion from disposal.

The strong diversion performance by the County would suggest that fine tuning, generally balancing costs with incremental waste diversion benefits, is the required approach with respect to continued growth of public programs. There is, however, a final portion of the household waste stream with significant diversion potential: Source Separated Organics (SSO, also known as a "Green Cart" or "Green Bin" program). Based on programs in other Ontario municipalities, this represents the next and final big step in waste diversion and is the exception to the "fine tuning" model.

Also highlighted in this section is a description of existing Extended Producer Responsibility programs in the Province of Ontario, the current legislative backdrop for the County, plus other government initiatives that may provide direction and support for waste diversion now and into the future.

## Future State and Waste Generation Estimates

Population growth and waste generation estimates play an important role in determining the desired future state. In particular the research strives to determine what elements of the waste stream, such as recyclables, are still available in the garbage stream for diversion.

Available information suggests that the growth hubs through 2031 will be the three urban centres, namely Woodstock, Ingersoll and Tillsonburg. In total, projected population total growth will be 26%, and total projected household growth will be 32%. The difference is significant since curbside programs serve households, yet total waste generation is largely a product of consumption which is population-related. The challenge to the County in this period includes the cost-efficient and recovery-effective provision of service to more households with fewer people per household, including a multi-residential sector that will continue to grow.

For the past several years waste audits have been performed in Ontario in urban, rural and multi-family settings. Ultimately, audits from the City of London (applied to the County's urban households) and the County of Simcoe (applied to rural households) were used to determine broad percentages of various materials found in the waste stream. The most significant single category is food waste, representing about 24% of the total. Again, this points to potential consideration of SSO as the "next big thing" in local waste diversion.

Also discussed in this section are the characteristics of Industrial, Commercial and Institutional (IC&I) waste and Construction and Demolition (C&D) waste in the County, with the objective of identifying policies and programs to promote the diversion from disposal of specific, identified materials to save valuable space in the County's landfill. It should be noted that the County has implemented an innovative C&D diversion program at its landfill by imposing differential tipping fees for separated recyclable C&D loads and offering diversion bins for recyclable C&D wastes.

## Alternative Waste Management Systems and Waste Diversion Strategy

The bridging of current and future states begins in this section, where alternatives are researched and goals and objectives developed, eventually resulting in a long list and then a short list of program options. Based on meetings with the Steering Committee, which was comprised of three political representatives including the County Warden and two local mayors, four municipal operations staff, two municipal customer service staff, two County Waste Management staff and three private individuals, goals for the project were developed. The study team was directed to:

- Develop "Reasonable Objectives";
- Provide strategies to enable more "Individual Responsibility";
- Increase and expand "Promotion and Education";
- Increase "Collaboration" and "Standardization" across the County;
- Consider "Source Separated Organics" diversion; and
- Develop "Waste Targets", specifically reduction and generation rates.

Following this meeting, the project team developed a long list of possible program options which was eventually refined into 25 options that could potentially be adopted by the County, pending final evaluation by the Steering Committee.

## Evaluation of Options and Recommendations

Items on the short list were considered by the Steering Committee and screening was done to develop the priority activities. A set of screening criteria were employed and a consensus process used to discuss each candidate strategy. These were:

- Effectiveness of Approach: used in the context of how likely the option would produce expected results (i.e. increase participation, diversion, etc);
- Economically Feasible: consideration was given to both option's capital and operating costs (at a high conceptual level) including consideration of those costs in relation to the other options;

- Accessibility to the Public: the option was considered against the current programs and evaluated as being more, or less, accessible than the current programs. An example would be whether the option was a curbside approach or a depot program; and
- Ease of Implementation: referring to how the County would roll-out the option (i.e. could it be done with current staff or would additional staff be required?)

The short-listed options were then subjected to a second round of cost and diversion/effectiveness research so that these aspects would be refined to a greater level of accuracy for the report. The final results, and the final configuration of program options and other recommendations, are discussed in the final section of the report.

## Stakeholder Consultation

The planning process includes a consultation aspect, incorporating the input of the Steering Committee and two electronic surveys. The initial survey was conducted in February and March of 2012 and attracted 729 responses. County support through Twitter™ feeds and media contact was largely responsible for the high response rate.

The intent of the first E-survey was to measure public attitudes and perceptions regarding current and future waste management and collection programs. These general questions and answers did not deal with specific details related to the IWMP, but are used to help guide the process. Responses to the survey indicate that there are a number of program opportunities for the County, including program promotion and public education needs. The survey also provides a sense of what people may require in the way of information and notice should program changes be contemplated as a result of the IWMP.

A number of specific responses provide significant information about divided opinions in the community concerning certain program elements. This survey does not delve into why opinions exist, but seeks to inform the process by identifying areas of potential concern. Of note, when asked to agree or disagree that they were satisfied with the frequency of Blue Box collection, just under 60% agreed or strongly agreed while just under 40% disagreed or strongly disagreed. This represents a level of polarization in the community on the issue.

The second of the two electronic surveys will be posted during the consultation period, and will focus on more specific aspects of the IWMP. While the overall body of information received from the two surveys will assist the Steering Committee, County Council and the IWMP in general in determining program priorities, results of the second survey specifically may impact the final section of the report when public opinion, based on a viewing of the posted Interim Report, is used to review and revise IWMP priorities.

## Strategies, Impacts & Program Considerations

The final section of the report contains the proposed program options with expectations of cost and effectiveness, and provides initial thoughts on their implementation. This section will be reviewed once the second electronic survey is completed.

The options generated by this study fall into three categories:

- Actions for direct implementation with assigned cost and impact estimates;
- General system improvements meriting consideration, in most cases being system improvements as well as policy and operating advice; and,
- Options to be evaluated during the waste services procurement process, when specific waste collection and processing configurations, new and existing, can be compared and evaluated.

### Actions for direct implementation

There are eight actions for direct implementation, including:

- enhancing the current education and outreach program, by expanding on promotional materials and media activity as well as interactive community engagement strategies;
- revising the existing bag tag program using a three step approach

- Step 1: Increase curbside enforcement to recapture revenues currently lost to non-compliance;
- Step 2: Increase the bag tag fee to \$2; and
- Step 3: Implement a large article fee;

Of note here is that the increase in bag tag rates (Step 2) is considered to have no impact on per household costs for residents. Revenues are used to reduce the County waste levy. The purpose of this step is to recoup a larger portion of the cost through direct recovery and a lesser fraction through the hidden, levy-based system, to provided added incentive to use diversion programs and in general to reduce waste output;

- a mandatory recycling bylaw;
- providing free additional and replacement Blue Boxes;
- establishing a community recycling centre;
- re-promoting the backyard composting program;
- introducing a school recycling program, and;
- establishing a retail take-back directory and a special event diversion program.

Costs and impacts for these program and strategy options are shown in the table below. Of note, the cost of an additional full time employee is shared equally in the cost estimates shown for promotion and outreach, Step 1 of the bag tag program (enforcement), the mandatory recycling by-law, the school recycling program and the development of the retail take-back program and directory.

Option	Estimated Diversion Impact		Estimated Net Cost per HH
	%	tonnes	
Broad Based P&E & Outreach	2.5%	987	\$5.49
PAYT (Bag Tag) Program			
Step 1: Increase Enforcement	1.8%	716	\$2.13
Step 2: \$2.00 bag tag + Enforcement	3.7%	1,432	\$0.00
Step 3: Large Article tag	0.0%	0	\$0.00
Mandatory Recycling By-Law	1.8%	716	\$3.96
Free Blue Boxes	1.6%	644	\$4.26
Community Recycling Centre	1.0%	400	\$11.18
Promote Backyard Composting	0.6%	250	\$2.49
School Recycling Program	0.2%	87	\$0.71
Retail Take Back Program & Special Events Diversion	0.1%	28	\$1.56
<b>Total for all Options</b>	<b>9.6%</b>	<b>5,260</b>	<b>\$31.78</b>

### General system improvements meriting consideration

During the IWMP process other system improvements with potential to further enhance operations and increase system efficiencies were considered. These are actions that might modify programs or activities already in place and represent continuous improvement opportunities, and include:

- working jointly with South-West Oxford and Woodstock to tender for services;



- addressing decreases in landfill tipping fees and the landfill reserve fund resulting from the success of the waste diversion programs;
- reviewing the leaf and yard waste depots and requesting a quote to provide seasonal curbside leaf and yard waste collection;
- reviewing the transfer of funds to each area municipality for customer service; and,
- exploring efficient collection routing and scheduling through the next procurement process.

In addition, elements considered to fall into the realm of general policy or operational advice include:

- the adoption of an annual per household disposal rate target;
- the introduction of differential tipping fees that promote diversion of materials at the landfill;
- the extension of the waste collection program to small businesses; and,
- the negotiation of a Shared Use Agreement for the Woodstock Transfer Station, again to obtain economies of scale for both the County and the City.

### Options to be explored during the waste services procurement process

Finally, it is felt that the best opportunity to explore certain elements will be when waste collection and processing tenders are issued. The reason for this approach is that attempting to project cost for some programs is difficult when it is known that cost quotes vary significantly based on service requirements, geography, service availability, economic factors and local conditions. In these cases the only true measure is to obtain pricing in a manner that allows the community to evaluate and select service, if feasible, based on specific community service expectations as expressed in a tender or RFP document.

To be considered at that time:

- joint tendering with South-West Oxford and the City of Woodstock to explore potential economies of scale and program harmonization;
- exploring the feasibility and benefits of collecting Source Separated Organics (SSO), commonly referred to as a Green Cart or Green Bin program. This can include service levels for urban collection only, or for the entire County;
- tendering a number of service scenarios in order to compare efficiencies (for example, four day versus five day collection schedules, single-stream recycling versus two-stream, etc);
- using the opportunity to determine if the recycling program can add new materials in an economical way, and;
- using the opportunity to determine whether collection options for yard waste, large items and white goods are economical.

### Next Steps

Following the second e-survey, the Interim Report will be revised and completed as the Final Report in response to comments received and the preferences demonstrated through the e-survey responses, which will be translated into program priorities and implementation timelines.

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Transmittal Letter

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Appendix C	Audit Estimates
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# 1. Introduction

In December 2011 Oxford County engaged GENIVAR Inc to lead the development of an Integrated Waste Management Plan (IWMP). The components of the plan were to include a review of the current waste management system, an examination of future needs, and the development of waste diversion strategies and alternative systems to be applied in the near and longer term. The planning process was to include a consultation aspect, and the planning approach incorporates the input of the steering committee, two electronic surveys and an open house event. The second of the two electronic surveys will be posted during the consultation period, at which time there will also be an open house event.

The IWMP is guided by the basic principle that the scope of study pertains to waste management programs operating within the County that are financed by the County. This allows the study team to focus on feasible actions that can be directly implemented by the County. In general, the proposed alternatives and options found in the proposed IWMP fall into three categories:

- Direct implementation by County staff, which may include a need to hire additional people and dedicate funds to new or enhanced activities
- Indirect implementation by the County after exploring options, including cost impacts, through the waste collection procurement process, and
- Adoption by the County of policies intended to drive waste diversion

Plan development, including research of options and refinement of alternatives in consultation with County staff and the steering group, took place in the winter and spring of 2012. The first of two electronic surveys was conducted in February and March, 2012. Draft report writing and additional research was conducted in the summer months for preparation of a fall consultation.

The interim report takes into account input to date, and includes preliminary cost ranges and diversion potential, where applicable. Following the fall 2012 consultation program a final report will be generated that will finalize for the County the proposed alternative system and associated implementation activities.

## 2. Oxford County's Solid Waste Management System

### 2.1 Description of Oxford County

The County is located in Southwest Ontario, uniquely positioned at the junction where Highway 403 meets Highway 401. The City of London to the west, the Region of Waterloo to the east and north, and Hamilton to the east are all within a 30 to 45 minute drive. The County consists of eight municipalities characterized by three urban areas (Woodstock, Tillsonburg and Ingersoll) and five predominantly rural communities (Norwich, Blandford-Blenheim, East Zorra-Tavistock, Zorra and South-West Oxford).

The County's population has remained relatively stable over the past several years, at approximately 103,000 and 49,500 households. The majority of households in the County are single family (91%) and the remaining are multi-residential dwellings (9%).

The community of Woodstock, with a population of about 38,000, represents the largest community in Oxford County, followed by Tillsonburg (16,600) and Ingersoll (13,100). These three communities represent about 60% of Oxford County's population.

#### Oxford County

##### Area Municipalities

- Ingersoll
- Tillsonburg
- Woodstock
- Norwich
- Blandford-Blenheim
- East Zorra-Tavistock
- Zorra
- South-West Oxford

##### Population

102,800

##### Single-Family Households

43,700

##### Multi- Residential Households

5,900

## 2.2 Oxford County's Current Integrated Waste Management System

While the County of Oxford consists of eight municipalities, the County provides waste management collection and processing services to only six— Ingersoll, Tillsonburg, Blandford-Blenheim, East Zorra-Tavistock, Norwich, and Zorra. The communities of Woodstock and South-West Oxford have chosen to provide their own collection and processing services. All garbage is disposed by all eight area municipalities at the County landfill.

Table 1 summarizes the waste management and diversion collection services provided by the County to its area municipalities. Further description of the services is provided below.

**Table 1: Waste Management Services in Oxford County**

Table 1a - Collection and Depot Services for each Municipality						
Services		Ingersoll	Tillsonburg	Blandford-Blenheim East Zorra -Tavistock, Norwich, Zorra	South-West Oxford	Woodstock
Garbage	Collection	Emterra			South-West Oxford	Woodstock
	Disposal	Oxford Landfill				
Blue Box	Curbside		Emterra Rosco (100 hhlds)		South-West Oxford	Woodstock
	Collection	Emterra		Emterra		
	Processing	HGC			Canada Fibres	
Leaf & Yard	Collection	Municipal Depots				
		Open windrow at landfill				
	Processing	Managed by Oxford County				
Large Items	Collection	Ingersoll - once per year curbside collection	Depot at Town transfer station	Emterra - once per year curbside collection	Emterra - once per year curbside collection	Woodstock - five times per year curbside collection
	Processing	Disposed at County landfill	Scrap metal removed, garbage sent to County landfill	Disposed at County landfill		

Service provided by or through the County	
Service Provided by or through the local municipality	

Table 1b - County Services Available to All Residents At Landfill or Through Community Events			
		At Landfill	Through Events
HSW	Hotz Environmental	✓	✓
White Goods & Scrap metal	Dundee Recycling	✓	✓
Cardboard	Genore Recycling	✓	
Electronic Waste	Ontario Electronic Stewardship Program	✓	✓
Tires	Ontario Tire Stewardship Program	✓	✓
Bale Wrap	Think Plastics	✓	
C&D waste	Try Recycling	✓	

### 2.2.1 Curbside Garbage Collection and Disposal

Oxford County provides weekly curbside garbage collection to the six area municipalities it services. Emterra provides the curbside collection service under a contract originally ending on June 30, 2013 but has been extended to April 30, 2014. As part of the contract, Emterra must deliver the garbage to the County landfill for disposal. The contract builds in promotion and education requirements, administration and equipment depreciation. In February 2003, the County became the largest community in Ontario to

introduce a full PAYT (pay-as-you-throw) program requiring residents and businesses receiving County garbage collection services to pay for each bag of garbage set out to the curb for collection. Currently, residents pay \$1.50 per tag that must be affixed to each bag of garbage set out for collection. As with most Ontario municipalities, the monetary value of the bag tag is not linked to any particular cost recovery item, and therefore the tag fee does not cover the full cost of waste collection and disposal. Bag tag rates, as is the case in the County, represent an amount that can reasonably be charged while still encouraging residents to reduce garbage. In essence, the County provides a quasi-variable rate program by requiring residents to affix different number of tags to garbage set outs depending on the size of the set out. Rates include:

- One tag is required for a standard garbage bag or rigid containers (less than 128 litres in size),
- Two tags are required for large garbage bags and containers ranging between 129-240 litres in size.

All residential garbage is disposed at the County's only landfill located at 384060 Salford Rd (County Rd 45) in the Township of South-West Oxford. The landfill is owned and operated by Oxford County. Hours of operation are Monday to Friday from 8am- 4:30pm and Saturday from 8am – 4pm. Tipping fees vary depending on the load but most garbage falls under the standard rate of \$65.24/metric tonne. The County landfill has an estimated 40 years remaining capacity.

## 2.2.2 Curbside Recycling Collection and Disposal

Residents have access to curbside recycling services based on a bi-weekly schedule. Fibres and containers are collected together bi-weekly with half of the County collected one week and the remaining on the alternate week. Residents typically place their recyclables to the curb using Blue Boxes but they may use other containers for excess materials. Additional Blue Boxes are available for residents to purchase from the County.

The County collects a wide range of recyclables in its Blue Box program including:

- Aluminum & tin cans;
- Plastics # 1, 2, 5, and 6;
- Beverage and Food cartons (e.g. milk and juice cartons, tetra packs);
- Glass bottles and jars;
- Newspapers;
- Mixed paper (e.g. kraft, magazines, telephone books, junk mail, cards, office paper);
- Boxboard (e.g. cereal boxes, paper towel cores, egg cartons);
- Corrugated cardboard.

The County of Oxford also uses Emterra to provide curbside Blue Box collection as part of the same contract with garbage collection. Emterra transports collected material directly to HGC in Brantford. The HGC contract was to end on June 30, 2013, but has also been extended to April 30, 2014. Emterra collects garbage from about 26,000 households including approximately 24,000 single family households and 2,089 of multi-residential households.<sup>1</sup> To enhance routing and service, the County has contracted with Grey Island for GPS services. As part of the contract, GPS units have been installed on all garbage and recycling collection vehicles.

Residents and businesses can use bins at the landfill to divert Blue Box materials. The materials are collected by Norfolk Disposal and transferred to the Woodstock transfer station for transport and processing at Canada Fibres MRF (fibres) and Hamilton MRF (containers). The contract with Norfolk is for hauling services only.

The County recuperates a portion of the program costs (up to 50%) as part of the Blue Box stewardship program managed through Stewardship Ontario.

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<sup>1</sup> It should be noted that not all multi-residential units receive County waste and recycling collection services, which accounts for the discrepancy in reported multi-residential numbers receiving collection and total number of units in the County.

### 2.2.3 Multi-Residential Collection

Within the County of Oxford (excluding Woodstock and South West Oxford) there are around 115 multi-residential (MR) buildings and 2,694 units representing 11% of the total households in the County.

Garbage collection is available to any building that wishes to participate in the County's curbside garbage and recycling collection services. Most participating buildings have residents bring garbage and Blue Box materials to the curb. All residents residing in multi-residential buildings must abide by the full user pay program and must have a tag attached to the bag. With no way to trace bags to tenants in the multi-residential building, this system has caused challenges for the County if residents put out a bag without a tag.

Any building can participate in the County's recycling collection program by either using totes (360 litre) or by bringing individual Blue Boxes to the curb. Use of individual blue boxes in a multi-residential setting can be problematic when collection crews fail to collect blue boxes due to contaminants. Uncollected blue boxes and scattered debris originating from these boxes become the responsibility of the property management to clean up, determine which Blue Box belongs to which tenant, and policing of the program. Ultimately, someone must deal with the contamination.

The County will provide on-site recycling collection using 360 litre totes. In order to provide the collection service, property management sign agreement and the property must meet access requirements. The County offers totes at 50% off purchase price to multi-residential building owners.

Collection is provided at same time as single family collection. The collection crew use the same vehicles for Blue Boxes and totes (the collection vehicles are equipped to tip the totes).

It is estimated that the County provides garbage collection to 44% of the MR buildings (in the six area municipalities) and recycling to 74% of MR buildings (see table below).

**Table 2: Collection Services to Multi-Residential Dwellings**

Collection Services	Garbage collection	%	Recycling collection	%
Private	54	47%	3	3%
Municipal	51	44%	85	74%
Unknown	10	9%	27	23%
Total number of MR Buildings	115		115	

### 2.2.4 Yard Waste

At present, the County does not offer residential curbside collection of leaf and yard waste; rather, residents are encourage to managed their yard waste on-site or take it to one of 11 depots available throughout the County.

The leaf and yard waste collected at the depots is transferred to the landfill and composted using an open windrow composting system.

### 2.2.5 Large Items Waste

Large Items include articles that are too large to fit into a standard garbage bag, such as:

- Mattresses & box springs
- Household furniture
- Carpets
- Large plastic tubs and non-recyclable plumbing fixtures



Within the County of Oxford, communities offer different large items waste collection services. The communities of Ingersoll, Blandford-Blenheim, East Zorra-Tavistock, Norwich, South-West Oxford and Zorra receive curbside large items waste collection at a designated time, once a year. Residents in the Town of Tillsonburg do not receive curbside collection of large items waste and, instead, must take large items materials to the Town's Transfer Station operated year round. Proof of residency is required.

Construction and demolition materials, white goods, hazardous wastes, glass and mirrors, scrap metal and automotive parts are not accepted as large item waste in the County.

### 2.2.6 White Goods

White Goods include large metal appliances such as fridges, stoves, washers and driers.

Residents have two options for managing white goods; either taking them to one of four annual multi-material collection events hosted by the County or delivering them to a depot at the landfill. The County does not charge for Freon extraction from items such as refrigerators or freezers during the collection events but charges \$15 per unit at the landfill.

Scrap metal can be recycled as well at the multi-material collection events, the landfill or mobile depot events. In 2012, the County operated four mobile depots.

- April 21 - Princeton Centennial Hall and Norwich Arena
- April 28 –Tavistock Public Works Shed and Embro Community Centre

Clean loads of scrap metal taken to the landfill is free, mixed loads of material (garbage and scrap metal) is charged \$65.24/metric tonne.

The County has a contract with Dundee Recycling to provide collection and processing of the white goods and scrap metal, which includes providing the bins, labour and transportation.

### 2.2.7 Household Special Waste (HSW)

HSW includes classes of waste that can damage the environment if disposed of improperly. These wastes are considered to be toxic, ignitable, corrosive and/or reactive. Wastes of this type include aerosol cans, antifreeze, bleach, fertilizer, fuels, medications, and paints and stains.

Oxford County operates a depot at the County landfill site located outside of the Village of Salford. The depot is open to the public on Thursdays and Fridays, 8 am to 4:30 pm, and Saturdays 8 am to 4 pm. HSW is safely stored in special containers and transported for processing or disposal at a facility licensed to handle these materials

The County also collects HSW during annual multi-material collection events. The County has a contract with Hotz Environmental to manage the HSW materials collected. The Municipal Household Special Waste stewardship program funds the majority of the County's HSW program (Phase 1 materials).

### 2.2.8 Electronic Waste and Tires

Both wastes are managed through depots and multi-material events provided by the County. As part of Ontario stewardship programs, these materials are collected, transported and properly managed by their respective stewardship programs – the Ontario Electronic Stewardship Program and the Ontario Tire Stewardship Program.

### 2.2.9 Construction and Demolition Waste

The County has introduced an innovative program to promote waste diversion of construction and demolition wastes with the prohibition of C&D waste in the landfill and alternative C&D Waste Diversion Depot. The C&D waste depot, open to the public and businesses six days a week, diverts recyclable construction and demolition waste by offering designated bins for:

- Asphalt, concrete and masonry;
- Metal (e.g.: iron, steel, brass, aluminum and copper);
- Untreated wood, wood scrap, pallets/crates;
- Gypsum drywall;
- Asphalt shingles;
- Porcelain/toilets; and
- Glass.

The County imposes a variable tipping fee for C&D wastes:

The County's 2013 tipping fee for C&D wastes is:

- **C&D Material** \$65.00/metric tonne; and
- **Garbage and C&D Material** \$65.25/metric tonne.

The program is managed by TRY Recycling Inc. on contract with the County. The end uses for the C&D materials as identified by TRY Recycling Inc. are identified below.

**Table 3: C&D Waste End Use**

<b>Diverted C&amp;D Materials</b>	<b>End Use</b>
Asphalt, asphalt shingles	Road base
Metal (e.g.: iron, steel, brass, aluminum and copper)	Scrap metal dealers
Concrete and rubble	Aggregate Road Base
Gypsum drywall	Soil Additive
Clean wood	Landscape mulch
Dirty wood	Animal bedding, burner fuel
Mixed wood	Animal bedding, burner fuel
Toilets	Aggregate road base

The County estimates that this program diverted a combined total of 11,200 tonnes of C&D material in 2010 and 2011 as shown in Table 4(as recorded by the County as part of its Landfill report).

**Table 4: C&D Materials Diverted Through Oxford County Diversion Program**

	<b>2011</b>		<b>2010</b>		<b>Total Diverted 2010 -2011</b>
	<b>Number of Loads</b>	<b>Tonnes</b>	<b>Number of Loads</b>	<b>Tonnes</b>	
Residual Waste	80	68	87	79	
Mixed C&D	1,081	1,453	2,011	2,077	3,530
Segregated C&D	2,177	3,522	3,647	4,106	7,628
<b>Total</b>	<b>3,338</b>	<b>5,043</b>	<b>5,745</b>	<b>6,262</b>	<b>11,158</b>

### 2.2.10 Bale Wrap

Introduced in July 2006, Oxford County offers an agricultural bale wrap recycling program at the landfill. The program is free and enables local farms to divert bale wrap. The bale wrap must be white, low-density, polyethylene. In 2010 Oxford County diverted 14 tonnes of agricultural bale wrap, which was used to make plastic lumber. The wrap is sent to Think Plastics in New Hamburg for recycling.

## 2.3 Oxford County Policies and Programs Supporting Waste Management and Diversion

### 2.3.1 Policies and Programs

Backyard Composting – The County estimates that over the past years it has distributed 12,872 backyard composters to residents at a subsidized cost of \$35 per unit. Using GAP default estimates, the County has diverted 1,280 tonnes of organic waste from landfill through its backyard composting program.

### 2.3.2 Promotion and Education

A review of the County waste management communication program was performed and is attached as Appendix A. Conclusions and recommendations are summarized below:

The materials are professionally constructed and it is clear that time and effort has gone into the overall program. The County may, however, wish to explore the content and presentation of various promotion and education tools more fully by hosting focus groups to provide input and perceptions with respect to the material and how it is perceived. The benefit of having a third party specialist conduct focus sessions is that it may reveal how effective current methods are including:

- What people believe to be the truth about programs
- What people think of the materials and website, good and bad, and most importantly what they think the material is telling them
- What information is important
- Preferences as to how people prefer to receive information

Sessions of this type are typically conducted by third party professionals with no relationship to the subject matter, which eliminates the possibility of the facilitator interjecting opinion or bias. The results of such sessions can lead to design improvements, content adjustments and revised educational budgets.

There are a few immediate opportunities to review the economy of language, key messages, clarity, and overall consistency of the material. These are considered to be potentially minor adjustments.

Waste Diversion Ontario and Stewardship Ontario have developed a number of recycling best practices, and adherence to these practices is financially rewarded. This includes having a communications plan and a communications monitoring plan. Samples of each are provided as part of the review.

While an increase in the budget will move the County towards “best practice” communication funding levels, there is still an issue with respect to spending by Woodstock (which the County reimburses) and the effectiveness of internal conflicts in terms of messaging and program harmony. If Woodstock spending is included then the “best practice” level of \$1 per household is attained but may not be as effective as it could be. The County might first approach the City to establish a unified cost per household. A second step would be to coordinate messaging, or at the least work to reduce messaging conflicts.

### 2.3.3 Customer Service

Each municipality assumes responsibility for customer service related to waste management and diversion services provided by the County. Customer service issues are received by the municipalities and forwarded to the County for resolution. The County waste management department allocates a portion of its budget (\$113,000 or 2.2% of its operating budget) to pay for these customer services.

## 2.4 Tonnage Data

In 2010, GAP analysis performed on Oxford County datacall submission reported that the County had achieved 54% diversion, with an average residential generation rate of 789 kg/hhld/yr, diversion rate of 427 kg/hhld/yr and disposal rate of 362 kg/hhld/year. Details are provided in Table 5.

**Table 5: 2010 GAP Residential Waste Flow for Oxford County**

Material Category		Tonnes Collected			Tonnes Processed	
		Curbside	Depot	Total	Diverted	Disposed*
Recyclables	Printed Paper & Packaging	7,370.44	-	7,370.44	6,927.14	443.30
	Wine & Spirits Containers	-	566.19	566.19	566.19	-
Other Recyclables	Textiles	-	-	-	3,529.32	863.18
	Bulky Goods	-	-	-		
	Scrap Metal	34.14	473.71	507.85		
	Drywall	-	203.67	203.67		
	Wood	-	686.36	686.36		
	Brick & Concrete	-	-	-		
	Other C&D Recyclables	75.37	2,852.73	2,928.10		
Tires	-	66.52	66.52			
Organics	Leaf & Yard Waste	8,275.32	-	8,275.32	8,193.01	82.31
	Grasscycling	-	372.39	372.39	372.39	-
	Backyard Composting	-	1,292.30	1,292.30	1,292.30	-
Other Diversion	MHSW	69.43	93.10	162.53	146.77	15.76
	WEEE	-	171.87	171.87	137.50	34.37
Garbage		13,928.65	2,599.05	16,527.70	-	16,527.70
Total		29,753.35	9,377.89	39,131.24	21,164.62	17,966.62
					<b>Current Diversion Rate</b>	<b>54%</b>

\*with the exception of the row entitled "garbage", this column represents process residues

## 2.5 Provincial Policies, Program and Regulations

### 2.5.1 Provincial Extended Producer Responsibility Programs

There are four EPR programs currently operating in Ontario, targeting Blue Box waste, waste electronics, municipal hazardous and special waste (MHSW) and scrap tires. The legislation enabling the development of these programs is the Waste Diversion Act, 2002, which created Waste Diversion Ontario (WDO) and gave WDO the mandate to develop, implement and operate waste diversion programs to reduce, reuse or recycle waste. More detailed information about each EPR program described below is available in Appendix B.

Two of the plans, those for Blue Box and MHSW, are the responsibility of Stewardship Ontario, the Industry Funding Organization (IFO) created to help industry stewards meet their obligations under the plans. IFOs are mandated to assess fees to obligated stewards such that their financial commitments are met under the plan.

#### Blue Box Program Plan

The Blue Box Program Plan took effect on February 1, 2004, and a revised program plan was submitted to the environment minister for review early in 2010. This plan is executed in conjunction with municipal recycling programs, and Stewardship Ontario works with WDO to meet the financial obligation of product stewards responsible for Blue Box waste, being 50% of net system costs. Funding to municipalities is provided through the WDO. To qualify for and receive funding Oxford County submits a report to WDO annually detailing, among other things, the costs to operate the Blue Box program and the tonnages managed through the County program. In 2012, Oxford Count received \$616,972 from the stewards, which represents 47.19% of the net costs to operate the program (WDO 2012).

#### Consolidated Municipal Hazardous or Special Waste (CMHSW) program

The Consolidated Municipal Hazardous and Special Waste (CMHSW) Program Plan was developed by Stewardship Ontario and launched July 1, 2008. At that time, stewards were responsible for paying a portion of the costs associated with collection and management of Phase 1 MHSW materials. On July 1, 2010 the program was amended to increase the materials captured (Phase 2 materials) and incorporate

full EPR, requiring that stewards of designated materials be financially responsible for all elements of their management. The list of Phase 1 materials covered by the program is provided in Appendix B.

Controversy over the roll out of the Phase 2 eco fees has resulted in the province temporarily assuming responsibility for Phase 2 program costs with municipalities continuing to be covered for the full costs associated with Phase 1 and Phase 2 collection and management. The MOE recently announced that effective October 1, 2012, the CMHSW program will include only those wastes in Phase 1. The government will assume responsibility for six selected HHW (rechargeable batteries, portable fire extinguishers, fluorescent light bulbs and tubes, mercury containing devices, pharmaceuticals and sharps) formally part of the Phase 2 list. The program will be delivered through a non profit organization starting October 1, 2012. The remaining Phase 2 materials are considered to be adequately managed through retail return programs.

MHSW collection is accomplished through a variety of methods, all brought together under the banner of the Orange Drop program. MHSW can be dropped off at municipal depots, mobile depots, retail locations, pharmacies and special collection events.

### WEEE Program Plan

The IFO established to manage the Waste Electrical and Electronic Equipment (WEEE) Program Plan is Ontario Electronic Stewardship (OES). The plan requires brand owners, first importers, franchisors, and assemblers to pay fees for electrical and electronic equipment (EEE) supplied to Ontario. Collected fees will be used by OES to operate the WEEE program.

Under the program, 44 different products are designated for diversion from landfill. Similar to the MHSW Plan the program was introduced in phases: Phase 1 was launched on April 1, 2009, and the revised Phase 1 and 2 Plan on April 1, 2010. Materials covered by the plan are identified in Appendix B.

Communities have several program delivery options including setting up permanent collection depots, establishing collection events or establishing mobile collection depots. As with the MHSW program, stewards assume the financial and infrastructural responsibility for the collection, processing, recycling and disposal costs for collected waste electronics.

### Used Tires Program

Ontario Tire Stewardship (OTS) is the IFO responsible for implementing the Used Tires Program, which targets tires supplied into the Ontario market for diversion from burning and landfill. Launched on September 1, 2009, the program allows consumers to have old tires recycled by dropping them off at registered collectors across Ontario.

Tire stewards remit fees for every tire they supply into the Ontario market, which are used to fund all aspects of the Program. OTS provides financial incentives for registered organizations that collect, transport, and process Used Tires or manufacture recycled products in accordance with the Program Plan.

## 2.5.2 Other Relevant Legislation and Policies

### Ontario 3Rs Regulations

In 1994, the Ontario Ministry of the Environment enacted the 3Rs Regulations (Regulations 101/94 to 105/94) under the Environmental Protection Act to increase the diversion of residential, Industrial, Commercial and Institutional and Construction and Demolition waste from disposal in Ontario and help Ontario meet its waste diversion targets.

The 3Rs Regulations include:

- Ontario Regulation 101/94: Recycling and Composting of Municipal Waste;
- Ontario Regulation 102/94: Waste Audits and Waste Reduction Workplans;
- Ontario Regulation 103/94: Industrial, Commercial and Institutional Source Separation Programs;
- Ontario Regulation 104/94: Packaging Audits and Packaging Reduction Workplans; and,
- Ontario Regulation 105/94: Definitions (Amendments to Regulation 347).

The regulations targeting the municipal sector, impact communities greater than 5,000 population and stipulate what materials must be diverted through recycling. Leaf and yard waste is also targeted for diversion.

In the case of the ICI sectors, the regulation target large establishments over a certain size or over a designated revenue. These establishments are required to conduct waste audits and develop waste reduction workplans that must be made available for MOE enforcement staff to review at any time. Depending on the sector, the MOE has designated which materials must be source separated for recycling.

Construction and demolition companies involved in large projects must also comply with the regulations by submitting waste reduction plans and source separating designated materials.

IC&I Category	Requirements to Carry Out Source Separation and Develop Waste Reduction Plans Under Ontario 3Rs Regulations
Hospitals	Applies to any public hospital classified as group A, B or F. Does not apply to nursing homes or homes for the aged.
Hotels and motels	Applies to hotels or motels with more than 75 units and located in a local municipality that has a population of at least 5,000.
Office Buildings	Designated if it has at least 10,000 square metres of floor space for use as offices and located in a municipality that has a population of at least 5,000.
Restaurants	Restaurants are designated if gross sales for all restaurants operated by the owner in Ontario were \$3 million or more in any of the two preceding calendar years. Applies to owner's restaurants in municipalities that have a population of at least 5,000. If the restaurant is in a designated retail shopping establishment or complex, office building, hotel or motel, hospital or campus the owner of the designated establishment is responsible for implementing a source separation program.
Retail Shopping Establishments	Designated if it has at least 10,000 square metres of floor space and located in a municipality that has a population of at least 5,000. For example a department store in a mall can ensure compliance by participating in the program operated by the owner of the mall.
Retail Shopping Complexes	Designated if it has at least 10,000 square metres of floor space of establishments (parking not included) and located in a municipality that has a population of at least 5,000. The owner may allow tenants to implement their own program but it must meet the regulations.
Educational Institutions	Applies to operator of an educational institution with more than 350 person enrolled.
Large Manufacturing Establishments	Does not apply if during the two preceding calendar years there was no calendar month in which the hours worked by the persons employed at the site exceeded 16,000 hours and the owner is able to demonstrate this fact.
Large Construction Projects	A construction project must implement a program if it consists of more than one or more buildings under construction with a total floor area of at least 2,000 square metres. Indoor and underground parking is included in the floor space calculation. The person responsible is the general contractor for the project. Projects involving renovation of existing buildings are not designated.
Large Demolition Projects	A demolition projects must implement a program if it consists of more than one or more buildings under demolition with a total floor space of at least 2,000 square metres. Indoor parking is included in the floor space calculation. The person responsible is the general contractor for the project.

Despite the intent of the regulations to promote waste diversion, there has been poor compliance by the ICI and C&D sectors affected by the regulations.

### Greenhouse Gas Reduction

The Government of Canada has committed to reducing Canada's total greenhouse gas emissions by 17 per cent from 2005 levels by 2020. This is the target that was agreed to in the Copenhagen Accord and is aligned with the United States.

Waste management activities are estimated to contribute three per cent (18 million tonnes) of Canada's annual greenhouse gas emission. Most of the emissions are generated from landfills primarily resulting decomposing organic waste in an anaerobic environment producing methane gas, a potent greenhouse gas that is considered to be a greater environmental threat than carbon dioxide. Other waste management related emissions result from collection and transport vehicles.

Recycling, on the other hand, helps to reduce greenhouse gases by replacing primary resources and additional energy required to manufacture new packaging materials.



## The Green Energy Act

In February 2009, the Ontario Government passed The *Ontario Green Energy Act*, which is intended to expand renewable energy production, encourage energy conservation and create green jobs. The bill was expected to result in:

- Supporting and expanding economic investment, thus building a stronger, greener economy with an estimated 50,000+ direct and indirect jobs to be created by 2012;
- Expanding Ontario's use of clean and renewable sources of energy such as wind, solar, biomass and biogas;
- Establish enhanced pricing for feed-in-tariff (FIT) for electricity from different renewable sources (solar photovoltaic, biomass, landfill gas, on-shore and off-shore wind and water power);
- Require local electrical distribution companies (LDCs) to accept small generators into their systems, and given a set of standard regulations for systems under 10kW (i.e. microFIT) and a variety of other sizes, depending on the technology involved.

Under the Green Energy Act, biomass is defined as an eligible renewable energy source and electricity generated from biomass sources is eligible for a FIT contract, which will pay 14 cents/kwhr for biomass based energy.

The Green Energy Act is of interest to municipalities in general because:

- Landfill gas recovery projects are eligible for FIT grants: and
- Biogas from the processing of organics in AD facilities is considered biomass related power.

## Regulated Mixed Anaerobic Digestion Facility (under the Nutrient Management Act, 2002 (NMA)).

Many large livestock farms in Ontario have begun to address nutrient management by establishing anaerobic digestion facilities to treat animal manures. Under the Nutrient Management Act and are permitted to take some off-farm materials to increase energy from the manure based biogas system.

The Nutrient Management Act allows the mixing of limited amounts of specified off-farm source materials into farm-based anaerobic digesters for the purposes of manure treatment and energy production without the requirement of a C of A. Referred to as a "mixed anaerobic digestion facility" is defined as an anaerobic digestion facility that treats both on-farm AD materials and off-farm AD materials on a farm on which an agricultural operation is carried out.

On farm mixed anaerobic digestion facilities must receive no more than 25% off-farm anaerobic digestion materials with limits on daily (< or equal to 200 m<sup>3</sup> and yearly < or equal to 10,000 m<sup>3</sup>) amounts. The types of materials accepted are limited to primarily food processing and pre-consumer food products and by-products. Municipal green bin (organic waste) is not permitted as an off-farm feedstock, due to potential contamination with non-organic materials (e.g. plastics, cardboard, etc.). While this is not an option for County municipal waste, this opportunity might be used by ICI establishments in the County that are currently sending organic waste to County landfill.

## Reform of Ontario Compost Quality Guidelines

Organic waste makes up approximately one-third of the residential waste stream and can comprise up to 50% of the waste stream in some ICI sectors, such as food services and hospitality. At present, most organic waste in Ontario is land applied, used for animal feed, source separated and composted with the remainder being landfilled.

While many Ontario municipalities have established green bin programs and/or divert leaf and yard waste, the Ontario government has decided to update Ontario's compost framework to improve composting standards and promote composting opportunities. In November 2009, the Ministry's published draft for consultation "*Guideline for Composting Facilities and Compost Use in Ontario*". The proposed revisions to Ontario's compost framework are intended to:



- Establish new categories for finished compost;
- Harmonize Ontario's standards more closely with other provinces;
- Provide updated best management practices for compost facilities; and
- Provide support to help minimize odour emissions.

These proposed changes were posted on the Environmental Registry in 2009 and underwent public and expert consultation in 2010. The final guidelines are now posted on the Environmental Registry.

### 2.5.3 Potential Future Directions

#### CCME Action plan for Extended Producer Responsibility

The Canadian Council of Ministers of the Environment brings together Federal and Provincial Ministers and their senior staff to, "develop national strategies, norms and guidelines that each environment ministry across the country can use"<sup>3</sup>. While CCME has no authority to impose requirements on the provinces, it has established a viable forum enabling provinces to work together to establish harmonized policies and programs.

One of CCME's key mandates over the years has been developing strategies for harmonized extended producer responsibility (EPR). In 2009 the Canadian Council of Ministers of the Environment (CCME) released the *Canada-Wide Action Plan for Extended Producer Responsibility* (EPR). This plan outlines intended actions, responsibilities and timelines that jurisdictions will work towards to implementing EPR programs for Phase 1 and Phase 2 designated products and materials. The Action Plan includes a commitment for members of the Canadian Council of Ministers of the Environment to focus on establishing operational Extended Producer Responsibility programs within six years starting from 2009 for the following Phase 1 materials:

- Packaging;
- Printed materials;
- Mercury containing lamps and other mercury containing products;
- Electronics and electrical products;
- Household hazardous or special waste; and,
- Automotive products.

Phase 2 Extended Producer Responsibility target materials of focus (within 8 years starting from 2009) include:

- Construction and demolition materials;
- Mattresses and Furniture;
- Textiles;
- Carpets; and
- Appliances (including ozone depleting substances).

While Ontario has EPR programs focusing on the Phase 1 materials identified in the CCME EPR Action Plan, most of the interest has been focused on the Phase 2 materials for which no EPR programs exist. With a goal of implementation of 2017, this leaves only five years to put a program in place.

#### Packaging Trends and Implications

Despite increased effort to improve participation rates in recycling programs and increase the capture rates for designated recycling materials, municipalities are finding that packaging trends are hindering further gains. Increased efforts are resulting in more support for recycling programs; however, the rate of increase in tonnes registered over time is falling and in some cases reaching a plateau.

There are two trends that characterize packaging:

- Lifestyles are changing which is impacting the types of materials in the blue box;
- Packaging trends are changing which is impacting the weight of materials in the blue box.

People continue to switch from paper based information to digital information. Newspapers, for example, are being replaced by digital feeds through the internet and accessed via computers, ipads, and smart phones. Consequently, the paper fibre stream in the blue box has shifted recently from 55% newsprint to

45% newsprint and since newsprint represents one of the heavier materials in the recycling stream this translates to lower tonnage.<sup>2</sup> Other lifestyle changes include a switch to products with plastic packaging including take home meals and pre-prepared foods. Plastic packaging adds more volume at little weight in the blue box program. Over a six year period (2004 – 2010) plastic packaging in the Ontario Blue Box program has increased almost 50% by displacing heavier packaging such as boxboard and cardboard, which increased only 14% in that same period.

Flexible plastic packaging, which includes plastic film, stand up pouches and bubble packaging, is a growing industry. In only a few short years, pouches have become an integral part of consumer packaging now involved in packaging of products from laundry detergent to wine to microwave entrees, sauces and baby food. According to a recent report by the Freedonia Group Inc. (2011), U.S. demand for flexible packaging will increase by 3.8% and exceed \$18 billion by 2015. While plastic film can be recycled in many recycling programs, stand up pouches and bubble packaging cannot. This is causing concern for municipalities, which are losing potential recyclable material and revenue.

Many packaging companies have invested time and resources to promote light weighting of packaging materials. Steel and aluminum cans, plastic water bottles, cardboard and boxboard boxes have experienced reduction in weights over the years. While the size remains the same, the weight is reduced thus impacting on the tonnage reported in blue box programs.

There are several implications for municipal diversion. Cost per tonne, which is the prevailing metric, is increasing. Greater volumes are being collected but the recycling stream is now and will continue to become more complex, making it even more expensive to collect and sort. In the meantime the current funding formula measures and compares programs based on cost per tonne, a measure that is declining in relevance while total packaging units collected increases and the heavier components including newsprint decrease. The basic conflict is this: all the attributes that make packaging more economical in terms of package-to-product ratios, transportation efficiency and user features are the same attributes that make packaging less economical to collect, sort and recycle. Some municipalities advocate that, at the very least, programs be measured and compared using metrics other than weight, and in general the growing cost is generating increased pressure to introduce full extended producer responsibility.

## 2.6 WDO Datacall Information for Comparable Municipalities

To provide context with respect to the current relative waste diversion performance of Oxford County, an evaluation and comparison was conducted against the Waste Diversion Ontario (WDO) 2010 datacall submissions for 4 similar sized Ontario communities, which kindly provided access to their Datacall information for the purpose of comparison. These communities, namely Kingston, Northumberland County, Kawartha Lakes and Simcoe County, were thought to be similar to Oxford County in a number of ways, and 3 of the 4 report to WDO under the same municipal grouping.

The performance data found in the WDO datacall and reviewed in this section is primarily for Blue Box programs only, but is considered useful for review purposes since Blue Box recycling programs represent significant investments to their municipalities and are a significant contributor to diversion.

In Ontario, the WDO Datacall provides a year-over-year assessment that can provide information on both individual program performance in key areas, as well as a comparison against similar programs. For Oxford County, the other programs in their municipal grouping are a good starting point.

For this analysis, several key performance indicators have been chosen for the purpose of a high-level comparison. There are variations in reporting that sometimes cause anomalies in the data. In cases where it is felt that a data point cannot be explained or is not useful to the analysis because the value represents an anomalous situation, the number is shown as a “-” in the table.

1. Total tonnage marketed per household served – this provides a comparison of how much material the municipality is diverting on a household basis. As can be seen in the table below, Oxford County is slightly lower than 3 of the other programs chosen for comparison. This may indicate an opportunity for more material available for collection, given that the programs have similar demographic profiles and likely have similar generation of Blue Box materials on a per household basis.

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<sup>2</sup> M. Kelleher. June/July 2011. Future Shock. Solid Waste and Recycling Magazine

Program	Tonne/Household
Oxford County	0.14
Program #1	0.15
Program #2	0.17
Program #3	0.16
Program #4	-

2. Cost per tonne –net municipal operation and material handling costs on a per tonne basis is the most common means of comparison. As seen below, the County is on the lower end of the scale.

Program	Net Cost/Tonne
Oxford County	\$177
Program #1	\$339
Program #2	\$173
Program #3	\$464
Program #4	-

Another useful cost comparison is to compare programs' costs for collection, processing and depot/transfer activities. It should be noted that combined collection and processing contracts, and a variety of revenue-sharing agreements (where the municipality received a discounted price for revenues shared with the service provider) make this type of comparison difficult. In looking at the breakdown by category below, Oxford County is lower than 3 of the programs, but also receives less revenue per tonne than 2 of others. This may suggest that there are opportunities to implement operational activities to improve product quality, which could warrant a cost-benefit analysis.

Program	Collection \$/Tonne	Processing \$/Tonne	Depot/Transfer \$/Tonne	Revenue \$/Tonne
Oxford County	\$186	\$99	\$16	\$124
Program #1	\$213	\$252	\$8	\$133
Program #2	\$189	\$138	\$0	\$154
Program #3	\$408	\$22	\$66	\$31
Program #4	-	\$149	\$24	\$121

3. Cost per household – while tonnage is a clear driver of costs in municipal operations, the number of households can be a more appropriate driver to consider in some cases, especially for collection activities. As with the tonnage-based comparison, Oxford County is on the low end of net cost per household.

Program	Net Cost/Household
Oxford County	\$25
Program #1	\$51
Program #2	\$30
Program #3	\$73
Program #4	\$42

As with the tonnage comparison, it is also useful to look at the disaggregated costs by overall activity. It is encouraging to note that the County is on the lower side for collection, which is directly linked to the number of households serviced. Similar to what was observed in the tonnage comparison,

Oxford is lower in both processing and depot transfer operations and also revenue, which could suggest opportunities to implement new activities to improve revenues received.

Program	Collection \$/Hhld	Processing \$/Hhld	Depot/Transfer \$/Hhld	Revenue \$/Hhld
Oxford County	\$26	\$14	\$2	\$18
Program #1	\$32	\$38	\$1	\$20
Program #2	\$33	\$24	\$0	\$27
Program #3	\$64	\$3	\$10	\$5
Program #4	\$40	\$6	\$1	\$5

4. Total funding as a percentage of cost – The ultimate aggregation of recycling performance data is reflected in the amount of funding awarded to municipal programs by WDO. More specifically, a higher percentage of the net cost covered by WDO funding is an indication that the program is demonstrating the use of best practices, has a high performance factor as calculated by WDO, and reports lower costs. As with many of the other performance indicators discussed previously, the County of Oxford is one of the best performers in the group.

Program	% of recycling net cost covered by WDO funding
Oxford County	47.19
Program #1	33.43
Program #2	47.76
Program #3	31.64
Program #4	41.71

5. Disposal and diversion – Municipalities are obligated to submit cost and recovery data to WDO to qualify for recycling funding, but during the process WDO also requires that all diversion and waste collection information be submitted. This information is used to generate per kg/capita figures, and percentages, for diversion through recycling and organics, and for waste going to disposal.

This comparison indicates again that the County performs well, particularly given that waste generated per capita is slightly high in relative terms. This presents an opportunity to promote overall waste reduction with some room for improvement in the recycling diversion rate.

Program	Kg/Cap Residential Waste Generated	% Total Residential Diversion Rate	% Total Residential Disposal Rate
Oxford County	380.82	54.09	45.91
Program #1	321.78	39.92	60.08
Program #2	359.67	55.16	44.84
Program #3	288.21	43.75	56.25
Program #4	393.65	58.42	41.58

The comparisons suggest that the County operates cost-efficient and recovery-effective programs, with opportunities to continue to fine tune performance.

## 3. Future State and Waste Generation Estimates

### 3.1 2010 Tonnage Report

Oxford County consists of three urban and five rural municipalities, with majority of the population residing in urban communities, with 27,233 (62%) households, compared with 16,321 (38%) households in the rural communities (see Table 6 below).

**Table 6: Population and Household Count in Oxford County**

Oxford County April 2011 Datacall Report	Population Count - Source: Stats Canada 2006 Community Profile	Total Household Count - Source: Municipal Finance Dept.
<b>Urban</b>		
Ingersoll	11,760	4,849
Tillsonburg	14,822	6,822
Woodstock	35,480	15,695
<b>Subtotal</b>	<b>62,062</b>	<b>27,366</b>
<b>Rural</b>		
South-West Oxford	7,589	4,020
Zorra	8,125	3,280
East-Zorra Tavistock	7,350	2,507
Blandford-Blenheim	7,149	2,746
Norwich	10,481	3,768
<b>Subtotal</b>	<b>40,694</b>	<b>16,321</b>
<b>Total for County</b>	<b>102,756</b>	<b>43,687</b>

Since the County provides curbside waste collection services to only six area municipalities (excluding Woodstock and South West Oxford), the household counts have been adjusted to reflect this situation. At the same time, while all rural communities are characterized by single family dwellings, this is not the case for the urban areas. The communities of Ingersoll and Tillsonburg have about 2,694 multi-residential households. The household breakdown is provided in Table 7.

**Table 7: Household Statistics**

Oxford County	Total Household Count - Source: Municipal Finance Dept.	Single Family Household Count	Multi-Residential Household Count
<b>Urban</b>			
Ingersoll	4,849	4,203	646
Tillsonburg	6,822	5,551	1,271
<b>Subtotal</b>	<b>11,671</b>	<b>9,754</b>	<b>1,917</b>
<b>Rural</b>			
Zorra	3,280	3,024	256
East Zorra-Tavistock	2,507	2,148	359
Blandford-Blenheim	2,746	2,658	88
Norwich	3,768	3,694	74
<b>Subtotal</b>	<b>12,301</b>	<b>11,524</b>	<b>777</b>
<b>Total</b>	<b>23,972</b>	<b>21,278</b>	<b>2,694</b>

## 3.2 Waste Audit Selection

A key component of the process in developing a waste management master plan is gaining a better understanding of the waste characterization of the community. Oxford County comprises both urban and rural communities, each with slightly different waste generation and composition characteristics.

While Oxford County conducted a very basic waste/recycling single family waste audit in the summer of 2011, the audit results could not be considered statistically valid and therefore could not be used in this study. Fortunately, Ontario has a surplus of residential waste audits conducted in other urban and rural communities. A review and assessment of available waste audits was conducted with Oxford staff to identify ones best reflecting Oxford community characteristics. The list of reviewed urban and rural single family waste audits is provided in Table 8.

**Table 8: Single Family Waste Audits**

Location	Date	Characteristics	Kg/hhld/yr
Wellington County Rural Not funded by CIF	October 2005 (Fall only)	<ul style="list-style-type: none"> <li>- rural at landfill including Blue Box</li> <li>- 140 hhlds sampled</li> <li>- 2 weeks</li> </ul>	736.7
Wellington County Urban Not funded by CIF	October 2005 (Fall only)	<ul style="list-style-type: none"> <li>- curbside small towns</li> <li>- 100 hhlds sampled</li> <li>- 2 weeks</li> </ul>	762.4
Halton Region Urban and Rural Funded by CIF	2007 four season	<ul style="list-style-type: none"> <li>- urban and some rural combined</li> <li>- 100 hhlds sampled</li> <li>- 2 weeks</li> </ul>	764.0
Simcoe County Mostly Rural Funded by CIF	2006 four season	<ul style="list-style-type: none"> <li>- mostly rural curbside</li> <li>- 100 hhlds sampled</li> <li>- 2 weeks</li> </ul>	616.7
Hamilton Urban and rural Funded by CIF	2006 four season	<ul style="list-style-type: none"> <li>- urban and some rural combined</li> <li>- 100 hhlds sampled</li> <li>- 2 weeks</li> </ul>	801.6
London Urban Funded by CIF	2007 three season	<ul style="list-style-type: none"> <li>- urban</li> <li>- 100 hhlds sampled</li> <li>- 2 weeks</li> </ul>	777.9
Muskoka Per SO data (2007)	2007 annual average	<ul style="list-style-type: none"> <li>- Mostly rural</li> <li>- 100 hhlds</li> <li>- 2 weeks/audit</li> </ul>	397.5
EWSWA Per SO data (2006)	2006 annual average	<ul style="list-style-type: none"> <li>- Mostly rural</li> <li>- 100 hhlds</li> <li>- 2 weeks/audit</li> </ul>	727.0

Norfolk County Urban and rural Funded by Norfolk	2011 (summer only)	<ul style="list-style-type: none"> <li>- Mostly rural</li> <li>- 100 hhlds</li> <li>- 2 week audit</li> </ul>	1,192.1
Richmond Hill Urban Funded by RH	2006 (fall only)	<ul style="list-style-type: none"> <li>- Urban</li> <li>- 44 hhlds for waste</li> <li>- 3 weeks (Pre-SSO program)</li> </ul>	1,138.0

The same process was used to identify relevant multi-residential waste audits that best reflected the characteristics of Oxford County. The list of available multi-residential waste audits is provided in Table 9.

**Table 9: Multi-Residential Waste Audits**

Location	Date	Characteristics	Kg/unit/yr
Region of Peel Funded by Peel	2010 four season	- N/A	685.1
Hamilton Funded by Hamilton	2010 fall (Fall only)	<ul style="list-style-type: none"> <li>- 10 buildings</li> <li>- 2 weeks</li> </ul>	504.1
Halton Region Funded by CIF	2007 four season	<ul style="list-style-type: none"> <li>- 10 buildings</li> <li>- mid rise</li> <li>- 2 weeks</li> </ul>	474.4
Hamilton Funded by CIF	2006 three season	<ul style="list-style-type: none"> <li>- 10 buildings</li> <li>- 2 weeks</li> </ul>	569.3
Markham Funded by Markham	2006 fall only	<ul style="list-style-type: none"> <li>- 2 buildings (140 &amp; 200 units)</li> <li>- 1 week</li> </ul>	253.0
London Funded by CIF	2007 four season	<ul style="list-style-type: none"> <li>- 10 buildings</li> <li>- 2 weeks</li> </ul>	458.0
Centre and South Hastings Funded by CIF	2006 four season	<ul style="list-style-type: none"> <li>- 10 buildings</li> <li>- 2 weeks</li> </ul>	526.8

In the end, Oxford County selected London waste audit for urban settings and Simcoe waste audit for rural settings, noting that the results of Oxford's rudimentary waste audit were in line with London and Simcoe's waste audits.

### 3.3 Waste Generation Rates

Waste generation rates were developed for the six area municipalities serviced by Oxford County. The summary waste generation rates for the urban, rural and multi-residential households, based on selected waste audits, is presented in Table 10. Note, the waste audits do not sample leaf and yard waste. Detailed results of each audit estimates are provided in Appendix C.

**Table 10: Estimated Waste Generation Rates for Six Area Municipalities Serviced by the County**

Households	Urban 9,754	Rural 11,524	Multi-Res 2,694	Total	% of Total Material
	tonnes/yr	tonnes/yr	tonnes/yr	tonnes/yr	
1. PAPER	1,396	1,479	234	3,109	20%



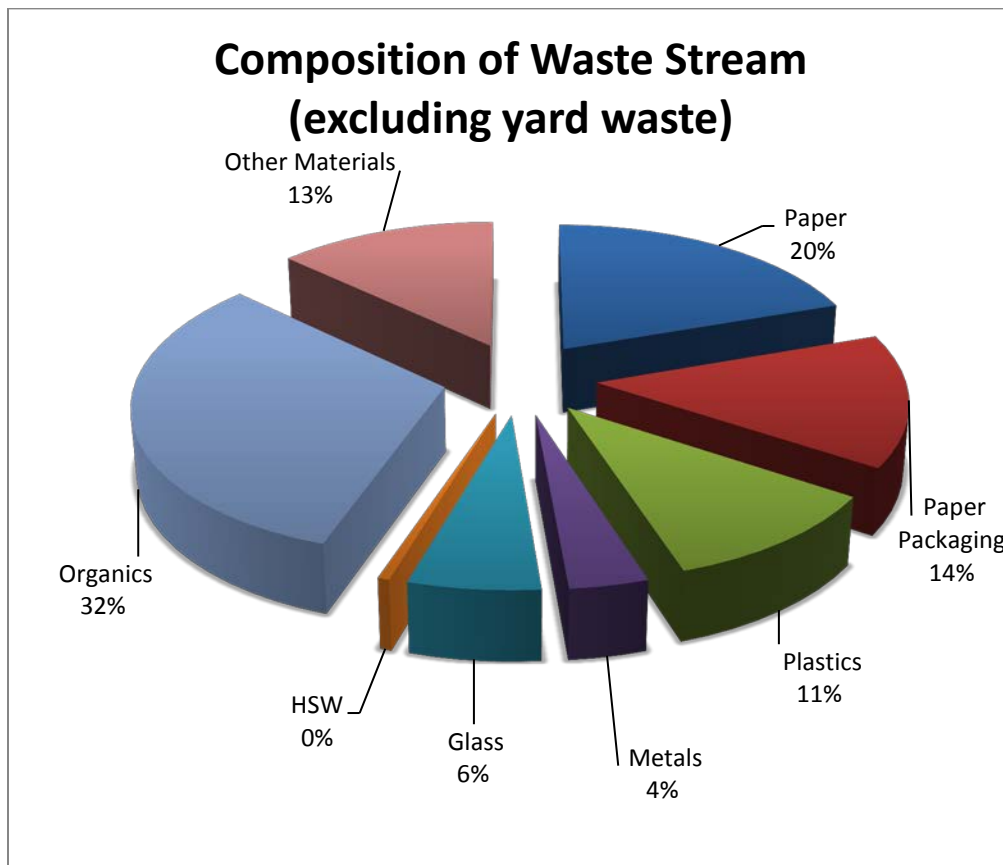
2. PAPER PACKAGING	1,032	1,114	158	2,304	15%
3. PLASTICS	715	859	125	1,699	11%
4. METALS	244	285	43	571	4%
5. GLASS	344	562	49	955	6%
6. HOUSEHOLD SPECIAL WASTE	33	49	5	86	1%
7. ORGANICS					
Food Waste	1,665	1,811	310	3,785	24%
Total Organics	2,219	2,398	400	5,017	32%
8. OTHER MATERIALS	1,002	841	219	2,062	13%
<b>Grand Total</b>	<b>6,984</b>	<b>7,585</b>	<b>1,234</b>	<b>15,803</b>	

The vast majority of the waste is generated by the single family sector shows an almost an even split between rural and urban households. The story would be very different if Oxford County were to assume collection for Woodstock, which would see the amount of waste generated by the urban sector triple, in comparison to the rural sector. The addition of South-West Oxford would add rural but the impact of Woodstock on the urban/rural mix would, when considering South-West Oxford, still be of great significance.

The multi-residential sector comprises almost 13% of the total number of households in the six area municipalities. Most of the sector is accommodated by curbside garbage and Blue Box collection as the multi-residential buildings tend to be low or medium rise with no chutes. Residents are required to take their garbage and recyclables down to an outside collection area regardless whether the area is centralized or at the curb.

The food waste component represents 24% of the total waste stream and 32% when taking towelling and pet waste into consideration. These three organic materials (food waste, pet waste, towelling) typically can be composted at a centralized composting facility. Paper and paper products combined represent 35% of the waste stream.

The total waste stream results are shown in the following pie charts.



Some preliminary analysis was conducted on the waste audit results for the six municipalities and the reported marketed recyclables, by HGC. Table 11 shows the estimated capture rates for select recyclable materials. Some materials were not included in the analysis, such as glass, due to the introduction of the LCBO deposit return program, which impacts the diversion numbers.

**Table 11: Estimated Capture Rates for Marketed Recyclables**

Material Category	Materials Accepted	Waste Audit Estimates	Marketed recyclables	Capture Rate Estimates
		Tonnes	Tonnes	%
<b>1. PAPER</b>				
Newspaper – Daily and Weekly Papers	x	2380.81	1883.84	79%
Newspaper - Other	x			
Telephone Books / Directories	x			
Magazines & Catalogues	x			
Mixed Fine Paper	x	in with OBB		
<b>2. PAPER PACKAGING</b>				
Corrugated Total	x	843.09	470.96	56%
Kraft Paper	x	702.98	360.15	51%
Boxboard / Cores	x			
Molded Pulp	x			
Composite Cans	x	99.43	34.11	34%

Gable Top Cartons	x			
<b>3. PLASTICS</b>				
PET Beverage Bottles Total	x	261.95	152.86	58%
PET Other Bottles & Jars	x			
HDPE Beverage Bottles	x	132.95	48.01	36%
HDPE Other Bottles & Jugs	x			
<b>4. METALS</b>				
Aluminum Food & Beverage Cans Total	x	157.98	75.80	48%
Aluminum Foil & Foil Trays	x			
Steel Food & Beverage Cans Total	x	233.08	151.60	65%
<b>Grand Total</b>		<b>4812.26</b>	<b>3177.33</b>	<b>66%</b>

Based on these estimates, the County is achieving a fairly high capture rate of 66% for Blue Box recyclable materials. This exercise should be used to identify materials, which may benefit by further P&E to increase capture rates, such as gable top containers (e.g. milk cartons) and composite cans (e.g. frozen juice cans), HDPE containers, and aluminum cans and trays.

### 3.4 Projected County Growth

The population in Oxford County is projected to grow 26% from 2011 to 2031, as forecast in a study completed by Hemson Consulting Ltd. titled, Population, Household & Employment Forecasts 2001-2031 (published 2006). Most of the growth will take place in the urban centres of Woodstock, Ingersoll and Tillsonburg, which will experience more population growth than the rural centres. By 2031, it is forecast that 64% of the population will reside in the urban centres and 36% will reside in the rural areas (Norwich, Zorra, South-West Oxford, Blandford-Blenheim, East Zorra-Tavistock). This is up from the current 55/45 - urban/rural split. See Tables 12 and 13.

**Table 12: Projected Population Growth in Oxford County to 2031**

	Woodstock	Tillsonburg	Ingersoll	Norwich	Zorra	SW Oxford	Blandford Blenheim	East Zorra- Tavistock	Oxford County	% change from 2011
1991	30,100	12,000	9,400	10,100	8,200	8,500	7,300	7,300	92,900	
2001	33,000	14,000	11,000	10,500	8,100	7,800	7,900	7,200	99,300	
2011	39,500	16,600	13,100	11,500	9,200	8,200	8,500	7,800	114,000	
2021	46,900	19,500	15,300	12,700	10,300	8,700	9,000	8,500	131,000	+15%
2031	52,800	21,600	17,100	13,700	11,200	9,100	9,400	9,000	143,700	+26%

**Table 13: Project Urban vs. Rural Population Growth**

	Urban Centres	%	Rural Centres		Oxford County
1991	51,500	55%	41,400	45%	92,900
2001	58,000	58%	41,500	42%	99,300
2011	69,200	61%	45,200	40%	114,000
2021	81,700	62%	49,200	38%	131,000
2031	91,500	64%	52,400	36%	143,700

The forecast number of households will grow from 42,600 in 2011 to 56,400 in 2031. The study prepared by Hemson Consultants was completed in 2006 and therefore projected population and household growth

rates for 2011. The household projections are slightly lower than actual household numbers in 2011, which were 43,687. See Table 14.

**Table 14: Projected Household Growth in Oxford County to 2031**

	Woodstock	Tillsonburg	Ingersoll	Norwich	Zorra	SW Oxford	Blandford Blenheim	East Zorra- Tavistock	Oxford County	% change from 2011
2001	13,200	5,980	4,170	3,390	2,820	2,650	2,570	2,460	37,400	
2011	15,500	6,860	4,940	3,700	3,250	2,760	2,880	2,750	42,600	
2021	19,000	8,170	5,970	4,250	3,680	2,980	3,110	3,130	50,500	+19%
2031	20,700	9,260	6,700	4,690	4,110	3,200	3,340	3,410	56,400	+32%

Most of the growth will occur in the single family sector, with an estimated 48,000 households projected growth in 2031 compared with 8,400 multi-residential units. Single family households will represent 85% of the total number of households in Oxford County in 2013, as shown in Tables 15 and 16.

Currently, single family households dominate the household sector representing 91% of the total number of households in Oxford County with the multi-residential sector representing only 9% of the total number of households. Although, single family households will continue to dominate to 2031, the multi-residential sector will experience an increase in growth rate to 15% of the total household proportion.

**Table 15: Single Family Household Growth Projections**

	Woodstock	Tillsonburg	Ingersoll	Norwich	Zorra	SW Oxford	Blandford Blenheim	East Zorra- Tavistock	Oxford County
2001	10,300	4,630	3,570	3,230	2,700	2,610	2,440	2,230	32,000
2011	12,100	5,490	4,290	3,540	3,100	2,710	2,740	2,490	36,500
2021	14,800	6,740	5,210	4,060	3,510	2,910	2,950	2,820	43,200
2031	16,700	7,780	5,830	4,480	3,920	3,110	3,160	3,040	48,000

**Table 16: Multi-Residential Household Growth Projections**

	Woodstock	Tillsonburg	Ingersoll	Norwich	Zorra	SW Oxford	Blandford Blenheim	East Zorra- Tavistock	Oxford County
2001	2,900	1,350	600	160	120	40	130	230	5,400
2011	3,400	1,370	650	160	150	50	140	260	6,100
2021	4,200	1,430	760	190	170	70	160	310	7,300
2031	4,000	1,480	870	210	190	90	180	370	8,400

The impact on waste generation rates in 2021 and 2031 are shown in Table 17. These estimates take into consideration the split between urban, rural and multi-residential households. The whole of Oxford County can expect residents to generate 35,300 tonnes in 2021 and almost 40,000 tonnes by 2031. Assuming Oxford continues providing service to the six municipalities, it can expect residents in the six municipalities to generate 19,400 tonnes in 2021 and 21,600 tonnes in 2031.

**Table 17: Projected Waste Generation Rates in 2021 and 2031**

	Oxford County		Six Municipalities	
	2021	2031	2021	2031
Urban	20,810	23,580	9,297	10,588
Rural	10,021	10,921	8,226	9,003
MF	4,502	5,180	1,862	2,035
<b>Total</b>	<b>35,332</b>	<b>39,681</b>	<b>19,385</b>	<b>21,626</b>

### 3.5 IC&I and C&D Waste Characterization

Oxford County is characterized by a diverse and healthy economy, with a growing automotive sector and healthy commercial and institutional sectors. This section reviews the employment characteristics of Oxford County and analyzes the waste stream characteristics of prominent ICI and C&D sectors. Appendix D contains a detailed IC&I and C&D waste characterization with the summary presented in this section.

#### Oxford County Employment Characteristics

Over the years there has been increasing interest in understanding the characterization of the waste stream of the industrial, commercial and institutional (IC&I) sectors to better direct resources in promoting waste diversion in these sectors. This interest has spurred on a number of jurisdictions in North America to conduct waste characterization studies targeting the IC&I waste streams, which can help in developing municipal policies.

Oxford County is characterized by diversity in its industry, commercial and institutional sectors. In 2010, the largest employers by industry (accounting for 44% of all employment in the County) in Oxford County comprised of three sectors: Manufacturing (~25%), Retail Trade (~10%) and Health Care and Social Assistance (~9%).

Three quarters (75%) of Oxford County's employment is represented by eight NAICS sectors.

- Manufacturing (~25%)
- Retail Trade (~10%)
- Health Care and Social Assistance (~9%)
- Agriculture (~7%)
- Transportation and warehousing (7%)
- Accommodation and food services (6%)
- Construction (6%)
- Wholesale Trade (5%)

An additional 12% of the combined work force in Oxford County are employed in sectors which deal primarily in administration and office work, including:

- Professional, scientific and technical services,
- Administrative and support, waste management
- Finance and insurance
- Public administration

Together these 12 sectors comprise almost 90% of Oxford County's work force.

A recent Oxford County Labour Force Development Study prepared in 2011 identified the fastest growing industries between 2006 and 2010 as the:

- Construction sector (15.5% growth)
- Finance and Insurance sector (15.4% growth)
- Manufacturing sector (13.8% growth)

The same study noted that "The overwhelming majority of businesses are small businesses with 60% of all recorded businesses being indeterminate in nature, meaning no employees or self-employed, cottage based businesses. Of the businesses with employees, 53.8% have fewer than 5 employees and 75.4% have less than 10 employees."

In order to determine the waste characterization of the key IC&I sectors in Oxford County, research was conducted to identify relevant IC&I waste audits. To date, there have been no comprehensive IC&I waste characterization studies conducted in Ontario. For the purposes of this study the CalRecycle (formally California Integrated Waste Management Board) waste characterization study is considered the most comprehensive and reliable study available. The advantage of this study over all other IC&I waste characterization studies is two fold:

- The California study sampled waste at the source (front end), rather than at the back end when the garbage trucks empty the waste at the landfill or transfer station;
- The California study sample waste diversion programs to give a complete picture of the waste stream, rather than providing a snap shot of the garbage stream only.

Not all of the sectors above can be measured in this waste characterization section. For example, due to the distinct nature of the manufacturing industry sector in Oxford County, it cannot be examined under a typical manufacturing waste characterization table that is a composite of different manufacturing industries. Automotive production facilities such as the CAMI and Toyota plants, given an industry focus on manufacturing efficiency, likely have established processes including waste reduction, diversion and disposal cost avoidance strategies. Both, GM Canada and Toyota Motor Manufacturing Canada have committed to working towards zero waste to landfill at all of its plants.

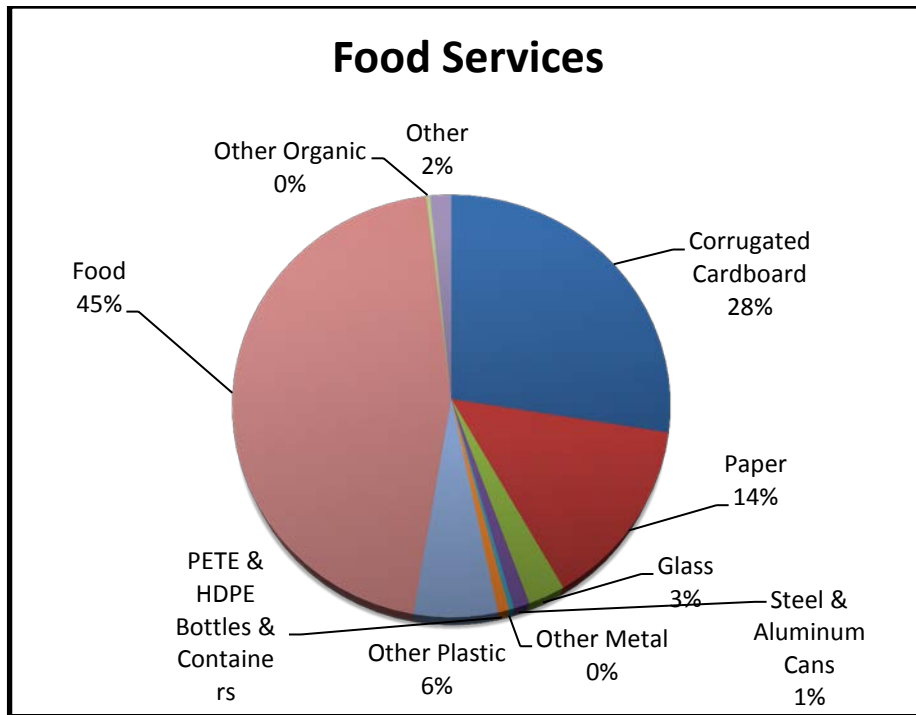
Similarly, no known waste characterization studies have been conducted on farm waste. A study completed for Clean Farms by 2cg in 2011, estimated that apart from organic food waste, the Ontario farming sector generated 14,500 tonnes of non-organic waste (plastic, paper, glass, cardboard) annually.

Four prominent commercial sectors previously identified by employment in Oxford County include: Accommodation and food services, retail, wholesale trade, and professional/administrative services. Using California's Waste Characterization Study, waste composition estimates were identified for four relevant sectors:

- Food Services,
- Small/Medium Retail,
- Wholesale Trade (note: it is assumed Warehousing would produce similar wastes),
- Offices.

The characterization of the waste stream for the various sectors is provided in the charts below.

### Fast Food and Restaurants



Over 90% of the food services waste stream consists of three categories of materials:

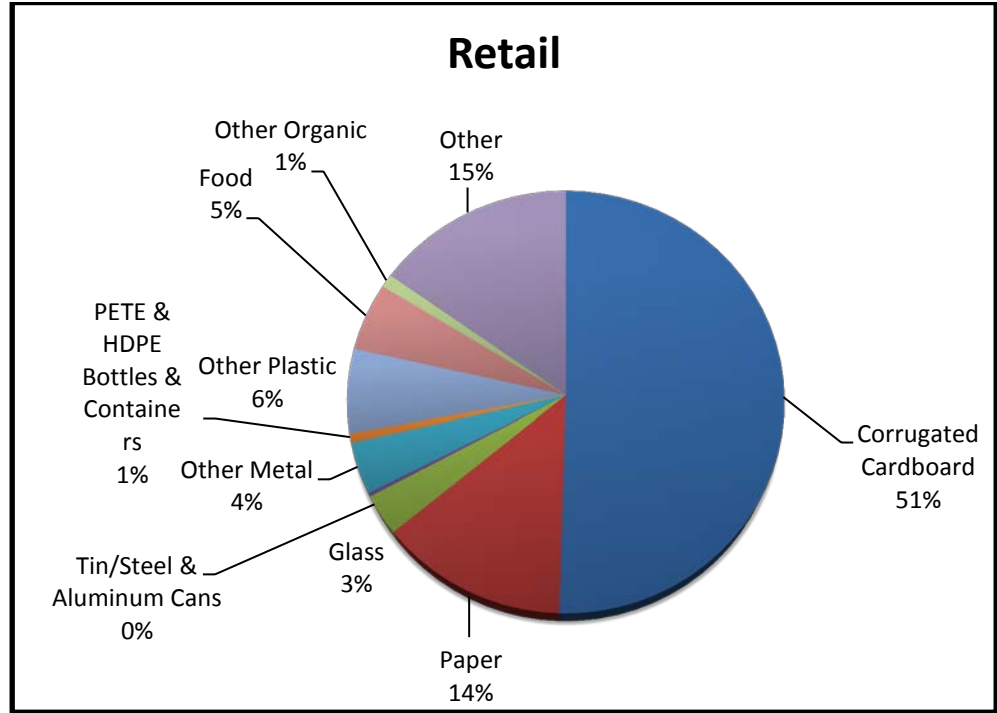
- Paper
- Food
- Blue Box containers



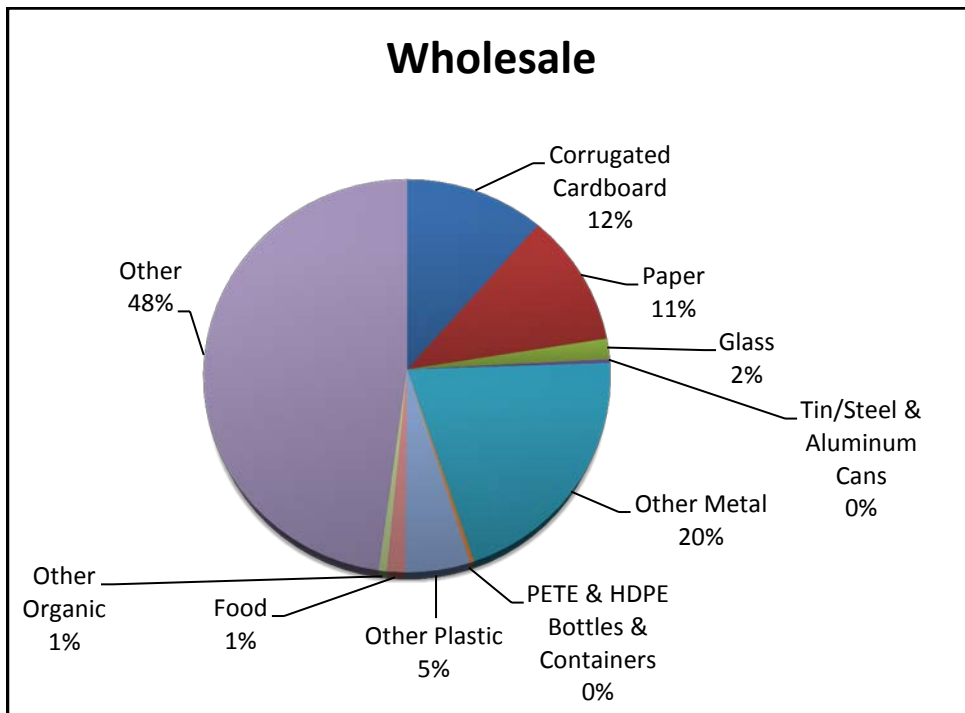
Retail Services

74% of the retail services waste stream includes three categories of materials:

- Paper
- Food
- Blue Box containers



Wholesale Trade (and Warehousing)



The majority of the wholesale waste stream (48%) is wood waste and scrap metal

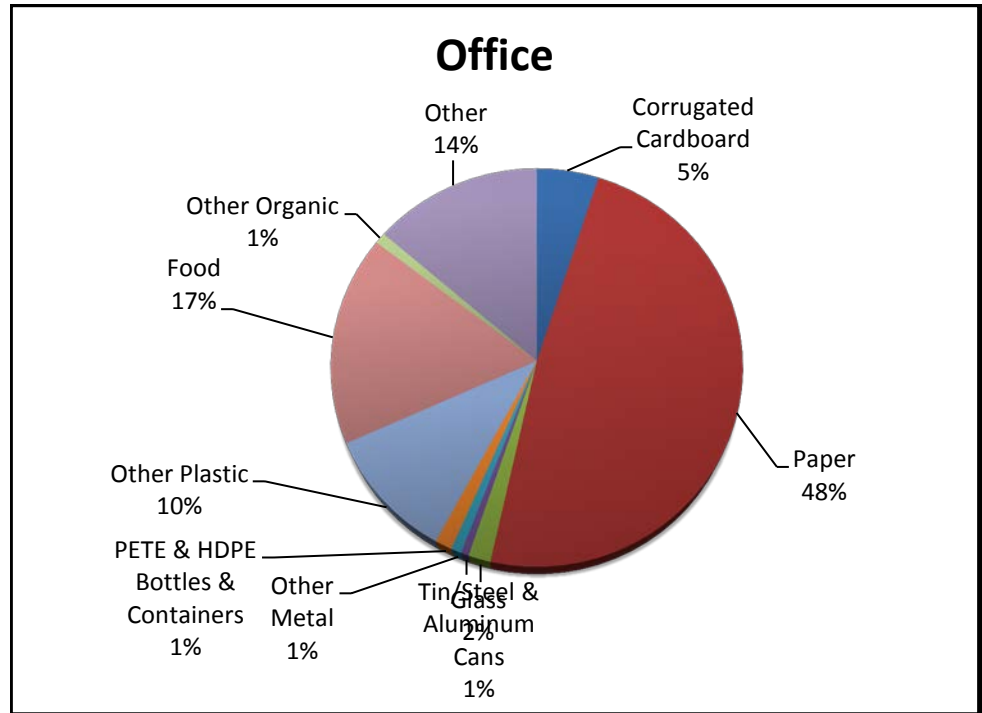
Another 25% of the waste contains three categories of materials:

- Paper
- Food
- Blue Box containers

Offices

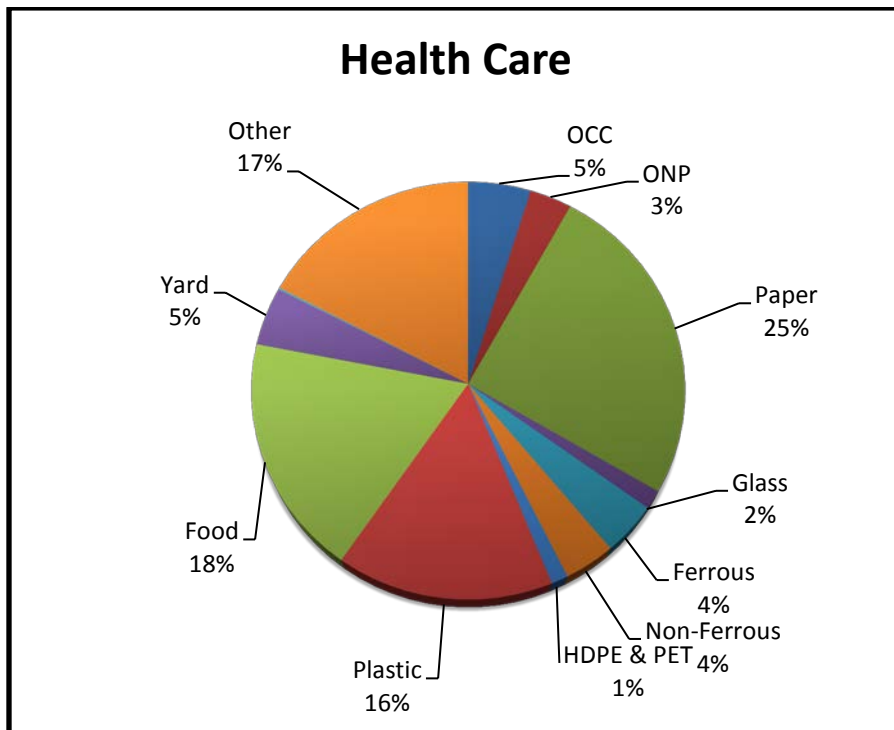
Almost 75% of the office waste stream comprises three categories of materials:

- Paper
- Food
- Blue Box containers



In house files were used to develop waste characterization for the Health care and social assistance sector, as shown below. This sector covers a wide range of services including hospital, nursing care facilities and ambulatory facilities.

Health Care and Social Assistance



Almost 70% of the health care waste stream consists of three categories of materials:

- Paper
- Food
- Plastic

## Construction and Demolition Waste Characterization

At the same time that CalRecycle conducted its IC&I waste characterization study, it also conducted a comprehensive construction and demolition characterization study titled, *California Integrated Waste Management Board. June 2006. Detailed Characterization of Construction and Demolition Waste. Prepared by Cascadia Consulting Group.*

The characterization study focused on different construction and demolition projects including:

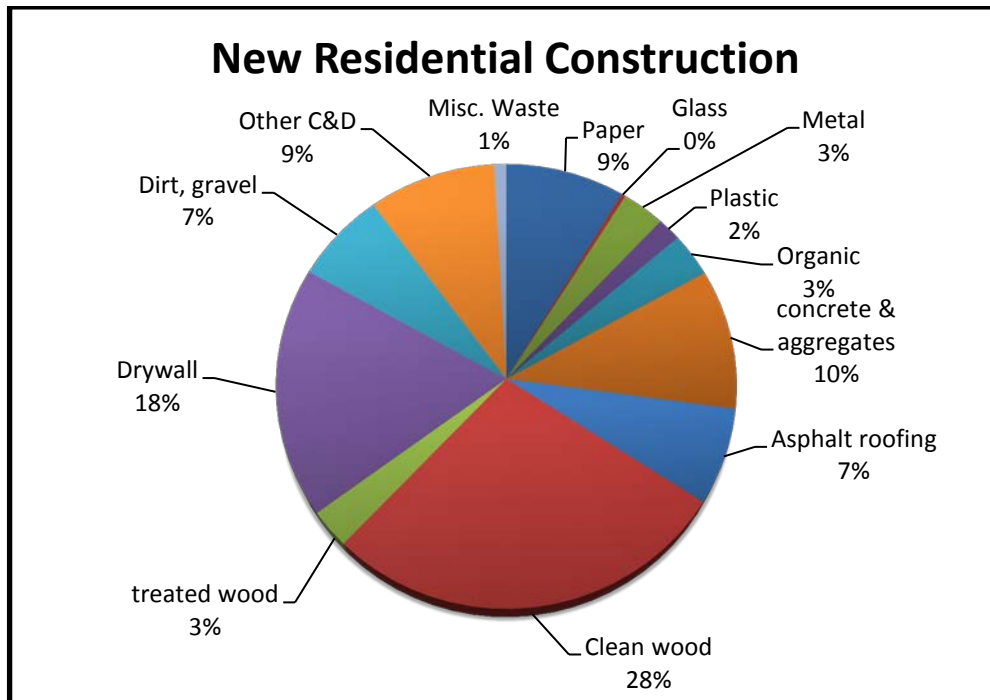
- New residential construction,
- New non-residential construction,
- Residential renovation,
- Non-residential renovation, and
- Demolition.

The study showed that the construction and demolition (C&D) sector produces a very different waste stream from the other IC&I sectors discussed above. The C&D sector typically produces a fairly homogeneous waste stream with majority of the residential construction and renovation waste falling into five categories materials:

- Drywall,
- Clean Wood,
- Asphalt roofing,
- Concrete and aggregates.

Using California's C&D Waste Characterization Study, the characterization of the waste stream for new residential construction and residential renovation is provided below.

### New Residential Construction



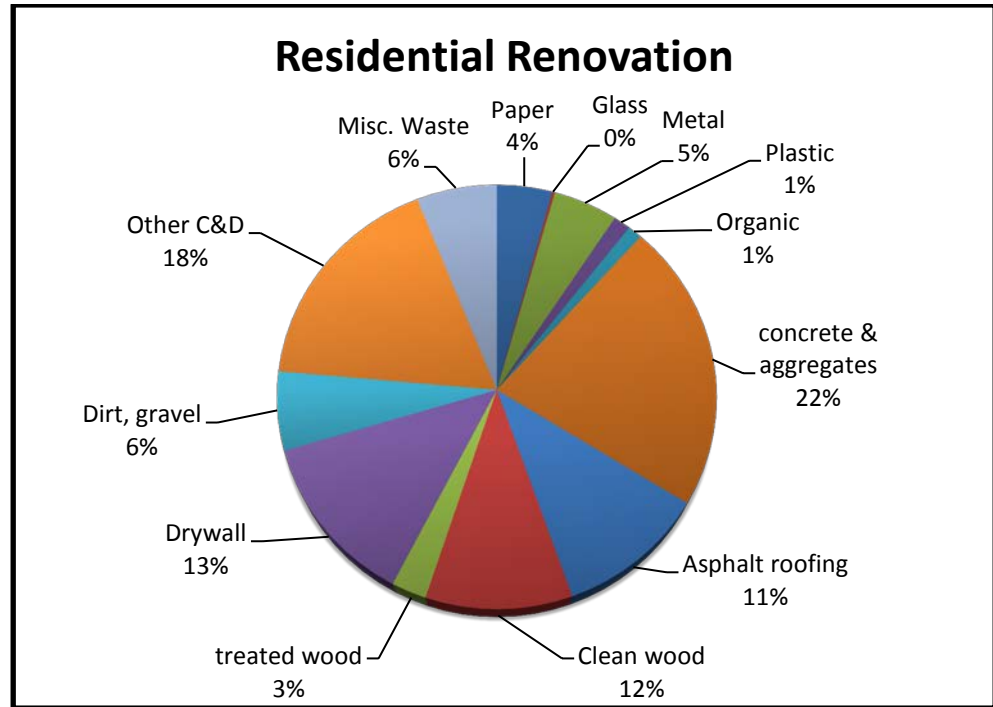
Almost three quarters (72%) of the new residential construction waste stream comprises of five categories of materials:

- Paper
- Drywall
- Clean Wood
- Asphalt roofing
- Concrete and aggregates

## Residential Renovation

61% of the residential renovation waste stream comprises of five categories of materials:

- Paper
- Drywall
- Clean Wood
- Asphalt roofing
- Concrete and aggregates



### Summary

Within the prominent commercial and institutional sectors in Oxford County, majority of the waste stream comprises of organics, paper, cardboard, and Blue Box materials, all of which can be recycled. Policies and programs to promote the diversion of these materials will help to save valuable space in the County's landfill. Diversion of these materials also helps to save natural resources, energy, water and reduce greenhouse gases.

The County has implemented an innovative C&D diversion program at its landfill for recyclable C&D loads and offers diversion bins for recyclable C&D wastes, which is a banned material from landfill. Previously the County imposed differential tipping fees for separated recyclable C&D loads but processing costs prevent the County from continuing on with differential tipping fees starting in 2013, when tip fees for C&D and regular waste will be virtually equal. The differential fee program had been very successful with over 11,000 tonnes of C&D materials diverted from landfill in the years 2010 and 2011.

## 4. Alternative Waste Management Systems and Waste Diversion Strategy

To this point in the IWMP, a baseline for the County, including current programs and operations, and the legislative and program context in which the County conducts waste management operations, has been established. The next steps in the planning process are aimed at defining a desired future state for the County and providing some direction on how to get to there. This includes developing County waste management objectives and program options, followed by the determination of which options to pursue in the future.

Sections 4 through 7 of this report capture this part of the process.

### 4.1 County Goals and Objectives

The GENIVAR project team met with County staff and members of the Steering Committee on March 30, 2012 to obtain insight and direction with respect to the goals and objectives of the project. The meeting included discussions to confirm:

- The expectations of the process;
- Vision, Goals and Targets;
- Identify priority areas; and
- Seek overall direction from the group.

The Steering Committee was comprised of three (3) political representatives including the County Warden and two (2) local mayors, four (4) municipal operations staff, two (2) municipal customer service staff, two (2) County Waste Management staff and three (3) private individuals. The county's Director of Public Works was an observer to the process.

The purpose of obtaining the group's insights and direction was to inform and guide the GENIVAR project team's development of a potential options list that would serve to improve upon the County's current waste management system. In effect, the development of a long list of program options would serve to become the Alternative Waste Management System.

In general, the March 30 meeting provided the project team with the following information (in no particular order of importance):

- Develop "Reasonable Objectives";
- Provide strategies to enable more "Individual Responsibility";
- Increase and expand "Promotion and Education";
- Increase "Collaboration" and "Standardization" across the County;
- Consider "Source Separated Organics" diversion; and
- Develop "Waste Targets", specifically reduction and generation rates.

Following this meeting, the project team developed a long-list of possible program options. The options list was developed by taking into consideration the guidance provided by the Steering Committee as well as the research undertaken by the project team of the County's current programs and services.

## 4.2 Research and Long List Development

In order to develop the most complete list possible of waste diversion program and policy options from which the County might draw an Alternative Waste Management System and Waste Diversion Strategy, the project team engaged in a program of research and options development. The purpose of the preliminary research was to identify and document an exhaustive list of policies and program approaches, and where possible, determine at a high level the potential impact in terms of diversion and cost of each.

The research for this study sought to uncover innovative and visionary municipal policies and programs from North America that are known to promote and deliver high performing waste prevention and diversion programs. The building of the long-list was accomplished by engaging in a number of research approaches.

The research employed a wide variety of resources including: reports, internet research, journal articles, personal contacts and industry sources; North America, and more specifically Canada and the United States, is the principal context for the Strategy. Some information was derived from personal experience in the waste management field, and report sources vary widely and include Stewardship Ontario Effectiveness and Efficiency (E&E) Fund and Waste Diversion Ontario Continuous Improvement Fund (CIF) reports on program upgrades, sustainable financing, multi-residential recycling and the Best Practices Assessment report. Other reports included: waste plans and program assessments recently completed by the project team and published technical papers. The research was supported by discussions with County staff, to identify additional sources, ideas and input to the research process.

The research and development of the long-list of waste diversion opportunities was directed by identifying key components of an integrated waste management system and ensuring the research uncovered waste diversion opportunities associated with each component.

Effort was taken to identify innovative waste diversion policies and programs implemented by North American and European communities. An initial long-list of waste diversion opportunities contained 68 options.

The long-list of options was presented to County staff on June 12. The purpose of this meeting was to review the list and engage in constructive dialogue to add, remove or expand any of the options prior to

meeting with the Steering Committee. During the discussion, the long-list revealed a number of opportunities that were considered not suitable for further consideration for a number of reasons, including:

- A few options were dropped from further consideration because the County had implemented the approach;
- Many were combined, usually because they were very similar and could be considered as a single approach which had a number of variations; and
- Some were removed because they were strategies that could not be directly controlled by the County or not part of the County's mandate.

Following the June 12 meeting, the project team updated the long-list accordingly. The initial long-list of options was reduced to a short-list of twenty-five options that could be potentially adopted by the County.

## 5. Evaluation of Options and Recommendations

The shorter-list of options was presented to the Steering Committee on June 27 at the County's office. The options contained in this were grouped into the categories for ease of review and assessment by the Steering Committee. The categories were as follows:

- Goals, Targets and Advocacy;
- Programs and Operations;
- RFP Considerations;
- Public Engagement and Education;
- Local Business;
- Municipal Hazardous and Special Waste (MHSW);
- Construction and Demolition; and
- Agriculture.

Each category had a number of options specifically to address either the direction provided to the project team (from the March 30 meeting) or to address an opportunity for improvement area that had been identified by the project team during the analysis of the current programs and services.

The June 27 Steering Committee meeting was structured to accomplish a specific goal, that being to evaluate each of the options individually and independently. The ultimate purpose was to identify which of the options were felt to be in the best interest of the County or those which would have the greatest impact on waste diversion or cost reduction.

### 5.1 Evaluation Criteria

In order to accomplish the evaluation, the project team, in consultation with the County, developed a set of screening criteria for use during the June 27 Steering Committee meeting. The screening criteria were:

- Effectiveness of Approach: used in the context of how likely the option would produce expected results (i.e. increase participation, diversion, etc);
- Economically Feasible: consideration was given to both option's capital and operating costs (at a high conceptual level) but considered those costs in relation to the other options (i.e. the cost of constructing and operating a new facility would be more expensive than providing additional Blue Boxes);
- Accessible to the Public: meaning the option was considered against the current programs and determined if the option would be likely to be more, or less, accessible than the current programs; and
- Ease of Implementation: referring to how the County would roll-out the option (i.e. could it be done with current staff or would additional staff be required).

The June 27 meeting was a full day session that was dedicated to the option evaluation. Each option was screened by applying a ranking method whereby a score that corresponded to a rank of high, medium-high, medium, low-medium, low was used. The scores assigned to each rank were:



- High = 5;
- Medium-high = 4;
- Medium = 3;
- Low-medium = 2; and
- Low = 1.

The evaluation criteria of each option was scored and then summed to produce a final score for each option. The final scoring determined the priority order for the options. As the evaluation process consisted of four (4) evaluation criteria, the highest possible score that an option could achieve was twenty points and lowest possible score was four points; zero points for any of the criteria were not used.

In order to determine whether the option progressed onto the short list, or fell-off the list, a threshold score needed to be developed. Staff determined that the threshold score would be eleven. The Steering Committee chose to err on the conservative side with the opportunity to add in a lower scored option that met a County mandate or goal.

The process resulted in the list of options being reduced to twelve options that the project team would evaluate further in terms of their respective diversion potential and cost.

A number of options were not considered for further detailed analysis, for two reasons:

- Several were considered to constitute general advice that the Steering Group felt appropriate for discussion in the report, and these are discussed in Section 7.1.
- Several were considered appropriate for exploration through a future procurement process. Unit cost figures would be competitive for these types of options (source separated organics collection, for example) and the County would be in a position to assess the costs and benefits of the activity at that time. Activities and programs of this type are discussed in Section 7.2.

## 5.2 Short List of Options

On the basis of the preliminary screening a number of options were forwarded for further evaluation. This list contained twelve potential approaches for which additional research was required. The main purpose of the added research was to further define cost and diversion potential associated for each.

**Broad Based Promotion and Education** – Either by increasing the volume of materials and media used to promote the program or by targeting the message at problematic materials, poor performing sectors or operational deficiencies (such as contamination of recyclables by non-recyclables in the Blue Box).

**Outreach** – This would involve personal contact and stakeholder engagement, such as workshops, the management of an education centre, the hosting of events or display opportunities at community centres and other public venues, and many other proactive approaches that foster support for programs. This could also include promoting Extended Producer Responsibility (EPR) to the local agricultural community to establish closed-loop diversion programs for agricultural twine and greater diversion of bale wrap.

**Provide Additional Blue Boxes for Free** – The concept is simply to assure that County residents have enough recycling capacity, more specifically adequate space in their Blue Boxes to store recyclables between collection days. This would prevent the need to place recyclables into the next option, namely the garbage receptacle, because the household Blue Boxes were overflowing with material.

**Community Recycling Centres** – This is a strategy that is becoming increasingly popular in the Greater Toronto Area (Peel, York, Hamilton) and would see the development of existing County properties to serve as multi-purpose drop-off centres. The purpose is to enhance opportunities for residents to divert materials by providing local options rather than having residents commute to the County landfill.

**Establish Retail Take-Back Programs** – This approach sees the County work with local businesses to make them aware of opportunities to take back goods. The County could develop a green business program to help local businesses reduce and divert waste along with other environmentally sustainable activities (e.g. take back programs and diversion recognition programs as good customer service).

**Increase Pay-As-You-Throw (PAYT) rates** – A financing strategies that could be used to promote waste diversion where the rate would to cover entire cost of delivering waste management services (currently covers approximately 41%). Contingencies should be considered (i.e. in the event that the increase in bag tag fee becomes prohibitive and results in lower sales of tags).



**Promote Backyard Composting** – Should County Council decide not to pursue curbside collection of Source Separated Organics (i.e. kitchen food waste), consideration should be given to enhancing and augmenting its promotion, education, and composter availability to maximize backyard composting of food and yard waste by residents. This could include aspects such as master composter programs, signs on lawns supporting use of BYCs, etc. Source Separated Organics are further described in Section 5.2, Options to be Explored through the Procurement Process.

**Mandatory recycling or source separation by-laws** – The establishment of by-laws stipulating source separation, again in support of existing waste diversion opportunities. This strategy would require meaningful enforcement support.

**Special Events Diversion** – Similar to, but unlike Outreach or Promotion and Education, this is an option where by the County establishes or coordinates with community groups and possibly contractors to make recycling available at special events within the County (i.e. at fairs, social gatherings, etc).

**Establish a school recycling program** – County would work with schools to help increase waste diversion by helping to establish competitions, encourage initiatives (i.e. litterless lunches, on-site composting), provide P&E geared towards students.

The waste diversion impacts and estimated costs for the short-list of options for single-family households are summarized in Section 7. Research (as described in Section 7) for the options included literature reviews, interviews and consulting with other Ontario municipalities.

## 6. Stakeholder Consultation

The consultation plan includes two electronic surveys and a public open house event. E-surveys are used to obtain input that support decision making with respect to the waste management planning.

The electronic surveys, conducted using SurveyGizmo.com, are intended to serve two purposes and are conducted at two separate points in the process.

The first e-survey was conducted in conjunction with the current state assessment and was designed to gain insight into the existing satisfaction with the current system, general attitudes and perceptions.

A second will more directly solicit comments on the draft IWMP report, as will a public open house event.

### 6.1 Electronic Survey #1 – Attitudes and Perceptions

An E-survey is a simple and inexpensive tool for gathering input on opinion, attitudes, perceptions and demographics related to the existing and future waste collection system. The intent of the first E-survey was to obtain general thoughts about current and future waste management and collection programs, based on some general questions and answers based on principle and not specific details related to the IWMP. Public reaction to the specifics will be obtained when the report is posted for comment.

The E-survey was posted on SurveyGizmo and available to residents from the beginning of February through to mid-March, closing on March 19, 2012. The supported the E-survey by placing a link on their website home page and using events, Twitter™ feeds and media contacts to promote participation. The E-survey gained momentum when traditional media published information from the County Twitter™ feeds, and when the E-survey closed, there were 729 total respondents. For this type of outreach and based on the total number of households in the County, this is considered to be an exceptional response.

The E-survey was constructed to be a simple “point and click” online exercise, usually taking three (3) to five (5) minutes to complete. Some people preferred to fill in a hard copy. When this happened the responses were entered into the electronic version by County staff.

Several demographic questions were used to permit filtering of the responses to determine if certain characteristics could be shown to influence answers to the perceptual and attitudinal questions. These were questions that asked people the following:

- The local municipality they lived in;
- Their age, and
- Whether householders worked inside or outside the County, or both.

These were followed by perceptions and attitudes about a number of different services and potential decisions related to future programs. These included:

- Frequency of Blue Box use
- Number of Blue Boxes used on a typical collection day
- Household management of kitchen waste through backyard composting
- Where do people get their garbage and recycling info from
- Satisfaction with the Waste Management Calendar
- Understanding about who to call to ask about garbage and recycling services
- Preferences with respect to receiving notice of program changes (timing, media)
- Satisfaction with Blue Box and garbage collection frequency
- Satisfaction with disposal options for Christmas trees and yard waste
- Relative importance of service elements: convenience, cost, recovery of recyclables and reliability of service
- Perceived effectiveness of diversion programs and bag tag program
- Current and future use of recycling depots
- Reasonable driving time to depots
- Willingness to have garbage day changed where benefit is demonstrated
- Interest in open house events

The ability to cross reference answers on SurveyGizmo provides an opportunity to “drill down” where initial summary answers are divided or to examine difference between groups of respondents. In most cases a five (5) point scale was used to obtain answers. For the perception and attitudinal responses an affirmative statement is made to which a person is asked to:

- Strongly Agree;
- Agree;
- Not Applicable or Don't Know;
- Disagree; or
- Strongly Disagree.

Selection criteria also included picking from a list, for example when respondents were asked what is acceptable in their recycling program, or a measure related to the question such as frequency of set out (every collection day, every other day, etc).

Survey results can be viewed in Appendix E. In general, results filtered by local municipality, age or where people work (inside or outside of the County) did not reveal any major variances in response. There are a number of informative findings:

- Over 70 of respondents put out their Blue Box every collection day, and over 26% every other collection day
- Over ¼ of the respondents either have a backyard composter but never use it (4.4%) or would not consider using a backyard composter (24.5%)
- Fliers and calendars issued by the County or local municipality are the most recognized source (75.4%) of garbage and recycling information, followed by ads in the local paper (40.4%) and municipal websites (22.4%)
- When changes to waste collection or depot hours are made, respondents favoured up to one month notice (53.7% said two weeks was fine, 38.2% wanted one month)
- When program or scheduling changes are made, respondents prefer to receive notice by direct mail (48.8%), followed by e-mail (27.2%) and the local paper (15.7%). Municipal website, radio, online feeds and other forms of noticed registered poorly with respect to preferences.
- An area in which opinions differed was satisfaction with the frequency of Blue Box collection. 58.6% agreed or strongly agreed that they were satisfied with the current frequency, whereas 39.9% disagreed or strongly disagreed
- 17.6% said they have no idea what their current leaf and yard waste collection options are, and 22.1% said that they do not have any leaf and yard waste
- Another difference of opinion appeared when responding to the statement that the community was doing enough to divert waste from disposal through its diversion programs. 39.2 % agreed or strongly agreed while 31% disagreed or strongly disagreed. Interestingly, 29.9% answered “don't know”, which is considered to be a valid answer and implies that respondents did not feel they

had a reference point from which to judge the community's programs. This is somewhat consistent with the finding that 81.5% have no idea where the County stands with respect to provincial waste diversion targets

- When responding to the statement that the bag tag system encourages residents to reduce, reuse and recycle, 58.8% agreed or strongly agreed and 34.6% disagreed or strongly disagreed. The reasons for disagreement are worth exploring in the follow-up e-survey
- For the following statement "If it lowered the municipality's cost for garbage collection, I/we would be willing to have my garbage day changed", 79.4% agreed or strongly agreed.

In general, the information from the survey indicates that there are a number of program opportunities for the County, including program promotion and public education needs. The survey also provides a sense of what people may require in the way of information and notice should program changes be contemplated as a result of the IWMP. In a follow up e-survey, which will include inquiries about potential program options, additional clarity on a number of preferences and perceptions will be solicited.

## 6.2 Electronic Survey #2 – Feedback Regarding IWMP Concepts

The second electronic survey will focus on a number of options and potential impacts associated with the proposed alternatives. Employing the same distribution and promotion techniques as the first electronic survey, the hope is to obtain equally robust participation and response. At the same time the Interim Report will be posted on the County website and made available for viewing, such that the e-survey will function as a "virtual" open house event, inviting comments and questions with respect to the proposed strategies.

## 7. Strategies, Impacts & Program Considerations

The short list of waste diversion options has been separated into a list of options to which waste diversion potential and costs can be attributed, and a list of options for discussion (refer to Section 7.1). It is important to note that the implementation of the waste diversion options below is likely to occur over several years, with some options requiring substantial lead time for public notification, planning and preparation.

The options described in the previous Section have an associated diversion and/or effectiveness potential and cost. The options are listed in order of diversion impact from greatest to least. The reality is that each option has a range of diversion potential and cost depending on the complexity and success of implementation. The information presented below adheres to one of the guiding principles of this study, namely the selection of strategies that can feasibly be implemented to increase diversion.

The cost impacts of individual options as well as the cumulative diversion impacts count up from the 2010 baseline diversion rate. For the purposes of this report, the baseline level of waste diversion has been taken as 54.1%, which was the County's overall waste diversion rate as reported in the 2010 Datacall.

The general approach to estimating costs, as summarized in Table 18, uses currently known unit costs to arrive at an estimate. For instance, the cost per unit of collection services (recycling, garbage) is known based on the current contractual arrangements. During the research phase of the study, program and study information from other similar programs is used to develop an expectation with respect to program impact. Using Option 4, free Blue Boxes, as an example, an estimate is made of how much will be recovered as a result of providing free Blue Boxes. Once an estimate is established, the following is applied to determine a cost for this strategy:

- Add the tonnes to the recycling program and multiply by the known unit cost
- Subtract the same tonnes from the garbage stream and multiply by the known unit cost
- Convert the tonnes into number of tagged bags and subtract the revenue to the County
- Add any administrative, staffing or direct costs as discussed in the narratives below

This approach provides estimates for cost per tonne and ultimately cost per household as they appear in Table 18. For Oxford County, the diversion impact information was considered conservatively since the existing diversion programs are performing well. In this context the implementation of some strategies are considered to have less impact than if they were introduced in a community that performs poorly with respect to waste diversion.

Waste diversion potential and costs were assigned for the following options:

### **1. Broad Based Promotion and Education and Outreach**

Background: The County currently has a successful P&E program and also offers an outreach program to schools, community groups, apartment buildings and businesses through the usage of traditional media and incorporating social media. Frequent, clear and concise messaging has been shown in many communities to drive waste diversion. As with every program however, the successes can be built upon to target specific issues.

Outreach, a sub-set of P&E, employs tools to directly engage with residents to foster and encourage behavioural change to increase participation and diversion. Commonly employed tools include: commitment (pledges), feedback, prompts and incentives. Outreach is a proactive activity, seeking out audiences for personal contact, events and speaking opportunities including schools, community groups, apartment buildings, festivals, public events, and fall fairs. Further community engagement through workshops, event hosting and display opportunities is part of this strategy. A potential approach, discussed below, is to hire a waste management assistant and make this part of their job, supported with a reasonable budget for supplies, materials and transportation.

Waste Diversion: This type of Option typically requires good coordination of activities and a strong public education and training program. While the impact that any Outreach program will have will vary based on several social factors, if successfully implemented, a reasonable target is reaching 1% of the population and effecting change in them.

Assuming the P&E and Outreach campaign increased waste management awareness and affected positive change in the behaviour of residents, these options, combined, would represent an additional 987 tonnes of material recovered and result in an approximate increase to the diversion rate of 2.5%.

As part of the implementation of these options, subjects such as promoting Extended Producer Responsibility (EPR) to the local agricultural community to establish closed-loop diversion programs for agricultural twine and greater diversion of bale wrap could be included.

Direct Cost: Municipalities that spend approximately \$1 per household on P&E tend to achieve 60% diversion of recyclable materials. Based on the assessment done for the Communication review the County is currently spending approximately \$0.84 per household. The added cost per household to obtain Best Practice level, therefore, is \$0.16.

Assuming a waste management assistant was hired for a fully burdened cost of approximately \$72,000 annually, and P&E and Outreach was 1/5<sup>th</sup> of the person's responsibilities, or \$.33 per household, the overall cost would translate to approximately \$0.49 per household.

Operational Cost: By recovering an additional 987 tonnes via these two options, this would result in an increase to the cost of managing the blue box program by approximately \$186,200, reduce the cost of managing the garbage program by approximately \$62,400 and reduce the revenue generated by the bag tag fee by approximately \$95,700. The result would be an approximate operational cost per household of \$5.00.

The approximate net cost (administrative and operational) per household for the Enhanced Promotion and Education and Outreach option would therefore be \$5.49.

### **2. Increase PAYT Rates**

Background: The County currently recovers a portion of its cost through the sale of bag tags. County By-Law No. 5160-2010 stipulates that each bag being less than 20kg in weight and no larger than 76cm by 96cm or greater than 128 litres have a bag tag affixed in the amount of \$1.50. The By-Law also states that two bag tags shall be affixed to a rigid container with a volume of between 129 and 240 litres (weighting less than 20kg) and three bag tags are to be affixed to a rigid container with a volume of between 241 and 360 litres. However, large articles (i.e. couches) do not require a tag in order to be collected. In 2010, the County's garbage collection and disposal costs were approximately \$3.15 million and the bag tag revenue was approximately \$2.24 million. The dollar value difference (\$0.91 million) is recovered through the County tax levy. As such, Bag Tag revenue covered approximately 76% of the cost to provide garbage collection and disposal services and taxation covers the remaining 24%.

Based on the County's 2010 data, the bag tag revenue is lower than it should be based on the tonnage of garbage generated. This suggests that the policy is not being enforced at the curbside, resulting in lower than expected revenues and higher than expected costs.

It is generally felt that when garbage presents a tangible cost to a resident they are encouraged to maximize their use of diversion programs, such as the Blue Box program. A three-part approach to the bag tag program could be considered, namely:

- Step 1: Increase the curbside enforcement of the policy;
- Step 2: Increase the bag tag fee, in addition to Step 1; and
- Step 3: Implement a large article fee, in addition to Steps 1 and 2.

With respect to Step 1, the responsibility for and enforcement of the policy should reside with the County's collection contractor and County staff through effective contract management. Once the directive for enforcing the County's policy has been put in to place, an assessment of curbside compliance along with a review of the bag tag revenues should be undertaken. This information could contribute to determining the extent to which revenues fall short of expenditures and an updated bag tag value can be determined.

With respect to Step 2, increasing in the bag tag price will accomplish two things: first, it will provide more incentive to recycle and second, it would provide a means to approach full cost recovery. If the County were to increase the bag tag value to \$2.00, bag tag revenue would increase to approximately \$3.16 million. This would cover the cost of garbage collection and disposal plus a portion of other expenses but cover only approximately 55% of all waste management expenses.

If the bag tag revenue met budgetary projections, there would be no need to tap into taxation. This would be a full cost recovery system. However, some care should be taken when implementing full cost recovery. It is generally felt that if an increase in the bag tag price gets the desired result (more recycling, more waste reduction) then the bag tag cost calculation should take into account that the cost will be spread over fewer bags than currently collected.

Waste Diversion: Based on experience in other jurisdictions, enforcement of contract and by-law requirements has been shown to increase recovery by approximately 10%. Applying this to the amount of material currently disposed of by County residents, it is estimated that an additional 716 tonnes of material would be available for recyclables collection (Step 1 only). This would translate to an additional 1.8% increase in the County's overall waste diversion rate. Combining Steps 1 and 2 would result in approximately 1,432 tonnes of recovered material and increase the diversion rate by approximately 3.7%.

With respect to Step 3, it is assumed that that there would be not be any additional tonnes diverted as large articles collected curbside currently are not managed to be diverted.

Direct Cost:

Step 1: The cost for Step 1 assumes that a waste management assistant was hired for a fully burdened cost of approximately \$72,000 annually, and contract enforcement was 1/5<sup>th</sup> of the person's responsibilities, and further that this expense is absorbed by Step 1, covering the direct administrative and staffing costs for Steps 2 and 3. This cost would translate to approximately \$.33 per household.

Step 2: Direct costs are absorbed by Step 1.

Step 3: Many communities in the province require large articles set out for collection to have a tag affixed, similar to the garbage bag tag. While the value of the large article tag varies, consideration should be given to the implementation of a system whereby collection and disposal costs for large articles are paid for by the users of the system. As the cost for enforcement of this program would be covered under Step 1, the direct cost would come from the purchase and distribution of the large article tags. Assuming the cost of producing large article tags is the same as that for garbage bag tags (i.e. approximately \$19,000 in 2010) this would result in a direct cost per household of approximately \$0.43. As with the garbage bag tags, if the cost to manage the program were offset by the revenues generated by the large article tags, the net cost would be \$0.00 per household.

Operational Cost:

Step 1: By recovering an additional 716 tonnes in Step 1, this would result in an increase to the cost of managing the blue box program by approximately \$135,100, reduce the cost of managing the garbage program by approximately \$46,000 and reduce the revenue generated by the garbage bag tag fee by approximately \$69,500. The result would be an approximate operational cost of \$158,600, or \$3.63 per household. The total cost for Step 1, based on direct and operational costs is therefore \$3.96, but is offset from bag tag revenues generated from the enforcement activity. This offset results in a net total cost for Step 1 of \$2.13 per household.

For Steps 1 and 2, by recovering 1.432 tonnes the County would incur additional processing costs for recyclable materials, a reduction in costs for the garbage program as well as a reduction in revenue from the bag tag sales. The approximate net Operational cost for managing the tonnage in Steps 1 and 2 would be approximately \$522,200, or \$11.95 per household. However, if the Operational cost to process these tonnes were taken into account in the budgetary process and if the bag tag revenues covered these costs, the net Operational cost per household would be \$0.00.

As the large article tag program is presumed to be a full user pay program and there is assumed to be no additional diversion, there is no impact anticipated to Operational costs. Again, if the large article tag revenues covered the cost of the program, there would be no tax levy impact for Operational cost.

### **3. Mandatory Recycling Bylaw**

Background: The enactment of mandatory recycling by-laws has been shown to increase participation rates, and implies a level of enforcement by the municipality. The preferred approach is to support implementation with a public education program that reinforces the availability of the recycling program as a means to meet the requirement of the by-law. In other words, the campaign is put in place to remind people that they have the means at hand to cope with the by-law.

It is best to assure that households have the required recycling capacity to cope with the by-law, and to make this capacity (one or more Blue Boxes) readily available to them. A recycling best practice is to make Blue Boxes for new capacity or for replacement available for free.

Curbside enforcement can be accomplished in a number of ways, selectively by either the collection contractor or County staff. The contractor will almost certainly detect, by sound, the presence of recyclables in the garbage stream. The contractor could, for instance, leave a notice at the property that after a certain date garbage with recyclables will no longer be collected. Some municipalities will conduct campaigns to tear open garbage bags to audit the contents, properly planned such that staff or contracted forces are properly dressed and prepared to open, view, and then re-bag or dispose of the contents.

Waste Diversion: Even without enforcement this type of by-law, it is known to have an impact, and in conversation with various municipalities in Ontario, there can be as high as a 10% increase in recycling. It is generally thought that there are people who, when they are made aware that such a by-law exists, tend to abide with what they believe is the law.

Based on the amount of garbage disposed in 2010 and a 10% increase in recycling, this option could serve to recover an additional 716 tonnes of Blue Box recyclables. This would increase the diversion rate by approximately 1.8%.

Direct Cost: Assuming a waste management assistant was hired for a fully burdened cost of approximately \$72,000 annually, and by-law enforcement was 1/5<sup>th</sup> of the person's responsibilities, the cost would translate to approximately \$0.33 per household.

Operational Cost: By recovering an additional 716 tonnes, this would result in an increase to the cost of managing the blue box program by approximately \$135,100, reduce the cost of managing the garbage program by approximately \$46,000 and reduce the revenue generated by the bag tag fee by approximately \$69,500. The result would be an approximate operational cost per household of \$3.63.

The approximate net cost (administrative and operational) per household for a Mandatory Recycling Bylaw would therefore be \$3.96.

### **4. Free Blue Boxes**

**Background:** A non-monetary Best Practice is to provide free, or subsidized, recycling boxes as it has been shown to increase capture rates. The County currently provides recycling boxes at a cost of \$4.50 for a box to hold paper products or \$5.50 for a box to hold container products (subsidized rates).

From the County's 2010 WDO Datacall submission, approximately 49% of the available Blue Box recyclable material was not recovered. Possible causes of this include the current bi-weekly collection frequency (i.e. being too infrequent) and/or an inadequate amount of storage capacity (i.e. a need to provide additional boxes).

**Waste Diversion:** Studies undertaken to assess capture rate data in municipalities that provide additional Blue Boxes have shown an increase in the recycling capture rate by an average of 9%. Applying this to the County, an estimated additional 644 tonnes could be recovered which would represent an increase in diversion rate of 1.6%.

**Direct Cost:** Depending on the availability and amount of external funding, the capital cost outlay could be significant depending on the number and size of additional boxes procured for distribution. Assuming a \$10 per unit purchase price by the County (for the bulk purchase and delivery), the estimated cost per household is \$0.99.

**Operational Cost:** By recovering an additional 644 tonnes, this would result in an increase to the cost of managing the blue box program by approximately \$121,600, reduce the cost of managing the garbage program by approximately \$41,400 and reduce the revenue generated by the bag tag fee by approximately \$62,500. The result would be an approximate operational cost per household of \$3.27.

The approximate net cost (administrative and operational) per household for providing Blue Boxes free of charge would therefore be \$4.26.

## **5. Community Recycling Centre (CRC)**

**Background:** Recycling depots are an alternative to, and are complementary of, curbside recycling programs as they offer an additional outlet for residents to divert materials from landfill. The County currently has at its central location, a diversion area at its landfill. This is coupled with curbside collection and various depots around the County for yard waste drop-off. The construction of multi-purpose drop-off centres is a strategy that is becoming increasingly popular in the Greater Toronto Area. The purpose is to enhance opportunities for residents to divert materials by providing local options rather than having residents commute to the County landfill.

Published studies that have assessed performance of residents who receive both curbside collection and have access to a supplemental depot (considered to be operating based on depot best practices) divert approximately 1% more annually. Based on the County's 2010 Datacall submission, this would result in approximately 400 tonnes of additional diverted material.

**Waste Diversion:** In communities that have constructed CRC's, the impact to the overall diversion rate has been approximately 1%. Based on the County's 2010 Datacall, specifically, the tonnes of waste generated, this equates to approximately 400 tonnes.

**Direct Cost:** Costs depend on intended use, available space/assets, and design complexity. Based on other municipalities in the GTA, capital costs per CRC range from \$2 to \$7 million with annual operating costs from \$1 - \$3 million. Based on the County's population size and quantity of materials, relative to GTA municipalities that currently have a CRC, a \$2 million capital cost (amortized over 20 years) and \$300,000 operating cost could be considered reasonable. As such, the estimated cost per household is \$9.16.

The capital cost is based on the lower end of the range and assumes the County does not have to purchase land for the facility and the facility is a straight-forward design. The operating cost is estimated based on the cost to manage the recycling depot at the landfill. This assumes careful placement of a facility to maximize access, accept a wide range of materials accepted and employ a minimal, if at all, charge to site user. (i.e. tipping fee).

**Operational Cost:** By recovering an additional 400 tonnes, this would result in an increase to the cost of managing the blue box program by approximately \$75,500, reduce the cost of managing the



garbage program by approximately \$25,700 and reduce the revenue generated by the bag tag fee by approximately \$38,800. The result would be an approximate operational cost per household of \$2.03.

The approximate net cost (administrative and operational) per household for a CRC would therefore be \$11.18.

## **6. Promoting Backyard Composting**

Background: In addition to the Option of providing free (or subsidized) Blue Boxes, and as part of a broader effort to increase waste diversion, the County could consider the provision of free (or subsidized) backyard composters.

Backyard composters are an effective tool to divert organic material from disposal and in so doing, serve to reduce greenhouse gases and lower the carbon footprint.

While the first E-survey for this study showed that approximately 35% of respondents stated that they do not use a backyard composter for a variety of reasons, 32% said they regularly use theirs and 14% said they occasionally use theirs, it also showed that approximately 20% would be interested in using one if they had one. Applying this 20% to the County's 2010 single family households, this equates to approximately 7,500 households that would be interested in backyard composters.

Excluding the multi-residential responses, the County has an opportunity to reach out, inform and engage with approximately 29% of the population to encourage them to utilize this option. This effort could be included with the P&E and Outreach options noted below so as to get as much value out of the program as possible. For example, a Master Composter program could be launched whereby County staff and/or community members can educate and train residents on the proper management, usage and benefits of a backyard composting program. Of specific note, the E-survey results showed that of the 35% of respondents who indicated that they do not use a backyard composter, the reasons given were:

- Approximately 25% said they would not consider it;
- Approximately 5% said they live in a multi-residential building; and
- Approximately 4% said they have one but never use it.

Waste Diversion: For every backyard composter sold and reported in the WDO Datacall, the County receives 100kg of diversion credit. Assuming the required number of BYC's are distributed over a period of 3 years, this equates to approximately 2,500 BYC's purchased by the County in year 1 for an approximate increase in diversion of 250 tonnes, or the addition of 0.6% diversion rate in the first year.

Direct Cost: Depending on the availability and amount of any potential external funding, the capital cost outlay could be significant depending on the number of backyard composters procured for distribution. Also, depending on the dollar amount the County elects to subsidize the composters, the cost could vary. However, a net cost per household of \$2.31 is calculated based on an estimated \$50 bulk purchase price and a County subsidized sale of \$10 each. For the 2nd and 3rd years, the County would assess number of BYC's distributed and revise the following year's purchase requirement accordingly.

Operational Cost: By recovering an additional 250 tonnes, this would reduce the cost of managing the garbage program by approximately \$16,200 and reduce the revenue generated by the bag tag fee by approximately \$24,400. The result would be an approximate operational cost per household of \$0.19.

The approximate net cost (administrative and operational) per household to subsidize backyard composters and promote backyard composting would therefore be \$2.49.

## **7. School Recycling Program**

Background: As part of Broad Based P&E and Outreach option could be to expand the recycling program to the various schools within the County. A school based program, including curriculum development and communications, would be complementary to and consistent with the curbside collection program. Discussion with the public and catholic boards would need to be undertaken to develop partnership / service agreements.

Waste Diversion: Assuming a school recycling program were to be implemented, studies have indicated that a recovery rate of 6kg per capita per year is reasonable. With a student population (2011-2012 school year) of approximately 14,560, this could recover approximately 87 tonnes of Blue Box recyclables and add approximately 0.2% to the overall diversion rate.

Direct Cost: Assuming a waste management assistant was hired for a fully burdened cost of approximately \$72,000 annually, and a school recycling program was 1/5<sup>th</sup> of the person's responsibilities, the cost would translate to approximately \$0.33 per household.

Operational Cost: By recovering an additional 87 tonnes, this would result in an increase to the cost of managing the blue box program by approximately \$16,500 and there would be no impact to the cost to manage the garbage program or reduction in bag tag revenue (since the County does not collect that material). The result would be an approximate operational cost per household of \$0.38

The approximate net cost (administrative and operational) per household for a School Recycling Program would therefore be \$0.71.

## **8. Retail Take Back and Special Event Diversion**

Background: Examples of Retail Take Back programs can be found across Ontario, with Halton Region and the City of Ottawa serving as potential models for Oxford County. Retail Take Back is a simple concept: retailers assume responsibility, including responsibility for the cost, for taking back and either recycling or properly disposing of specific items they sell.

The second element is the development of an electronic directory, found on the municipal website that allows people to find retailers or their representatives for a specific waste type. The development and periodic maintenance of the directory is where the County would incur some cost.

The City of Ottawa Retail Take Back program, for instance, currently lists over 130 different products and 800 participating retailers. Product categories include automotive (filters, oil, tires, batteries, and even car parts), garden supplies (plastic flats, Styrofoam flats), health (medications for people and livestock, mercury, eyeglasses, electric lift systems, sharps), electronics (appliances, batteries, phones, computers, TVs, cameras, fluorescent tubes, mercury), and household (books, building supplies, furniture, paint, sports equipment, toys).

Retail Take Back Programs can result in waste diversion for targeted and/or problem materials. Using a conservative estimate that this Option resulted in a 0.1% increase in diversion, this would represent recovery of an additional 18 tonnes of material.

Special Events require support from the County with respect to promotion and education materials specifically designed for the activity or event and possibly permitting. In general, these programs are typically successful where there is a high degree of involvement from volunteers who deliver informative and accurate sorting instructions and possibly includes the removal and/or refusal of unacceptable materials. In the case of Special Events Diversion, which may or may not be organized by the County, the provision of collection bins and post-event haulage arrangements would be needed.

Direct Cost: Assuming a waste management assistant was hired for a fully burdened cost of approximately \$72,000 annually, and a Retail Take Back Program was 1/5<sup>th</sup> of the person's responsibilities, the cost would translate to approximately \$0.33 per household. This time includes actively soliciting retail partners and development and maintenance of a directory.

Waste Diversion: Special Events and Retail Take Back Programs can have an impact performance and material recovery especially for those prefer not to visit the permanently located waste management facilities. Participation levels can vary depending on the location and weather so diversion impact is difficult to predict. However, these options could result in the recovery of an additional 28 tonnes of material. While the impact to the overall diversion rate is minimal in and of itself, Special Events and Retail Take Back Programs do provide an opportunity to interact with the community and provide information, receive feedback and create awareness of other County services.

With respect to Special Events Diversion, as these are provided by and operated by a contractor under contract to the County, the increased demand on existing County staff time and cost is considered minimal. Based on the County's 2010 budget, the cost per special event was

approximately \$49,000. For each additional special event offered, the cost per household would be approximately \$1.11.

**Operational Cost:** By recovering an additional 28 tonnes, this would result in an increase to the cost of managing the blue box program by approximately \$5,300, reduce the cost of managing the garbage program by approximately \$1,800 and reduce the revenue generated by the bag tag fee by approximately \$13,000. The result would be an approximate operational cost per household of \$0.12.

The approximate net cost (administrative and operational) per household for the development and support of a Retail Take Back program would therefore be \$1.56.

**Table 18: Summary of Estimated Cost and Diversion Impacts**

Option	Estimated Diversion Impact		Estimated Net Cost per HH
	%	tonnes	
<b>2010 Diversion Rate: 54% or 21,165 tonnes</b>			
Broad Based P&E & Outreach	2.5%	987	\$5.49
Improve PAYT Program			
Step 1: Increase Enforcement	1.8%	716	\$2.13
Step 2: \$2.00 bag tag + Enforcement	3.7%	1,432	\$0.00
Step 3: Large Article tag	0.0%	0	\$0.00
Mandatory Recycling By-Law	1.8%	716	\$3.96
Free Blue Boxes	1.6%	644	\$4.26
Community Recycling Centre	1.0%	400	\$11.18
Promote Backyard Composting	0.6%	250	\$2.49
School Recycling Program	0.2%	87	\$0.71
Retail Take Back Program & Special Events Diversion	0.1%	28	\$1.56
<b>Total for all Options</b>	<b>9.6%</b>	<b>5,260</b>	<b>\$31.78</b>

## 7.1 System Improvement Considerations

A review of Oxford County’s waste management system shows it to be a well-operated system, with residential and small business needs effectively met and innovative programs (such as the C&D diversion program) introduced to address other community waste management needs. Based on the review, the consulting team has identified several areas that could be examined by the County to further enhance operations and increase system efficiencies. Many of the areas identified here are further addressed in the sections below, and include:

- Have the County assume responsibility for garbage and recycling collection services from South West Oxford and Woodstock;

- Address the chronic decrease in landfill tipping fees and landfill reserve fund resulting from the success of the waste diversion programs in the County;
- Review the leaf and yard waste depots and request a quote to provide seasonal curbside leaf and yard waste collection as part of the upcoming collection procurement process;
- Review the transfer of funds to each area municipality to provide waste management customer service; and
- Address the need for a more efficient curbside collection routing and scheduling system by building the review into the upcoming collection procurement process.

## 7.2 Other Options for Consideration

Further to Section 5.1 where several of the options for the short-list were requested not to be evaluated but rather presented for consideration.

### 1. Adoption of an annual per household disposal rate target

Goal setting would allow the County to promote a target and measure the progress against that target. Based on the 2010 WDO Datacall, for instance, the kg/capita disposed by County residents was 175. Based on the municipalities in the Rural Regional municipal groupings (excluding the County), the average amount of material disposed was 206 kg/capital; the range from high to low being 302 to 141. A reasonable target might be to match the best in the group at an annual per capita rate of disposal of 141 kg and to review this annually to determine if the County's performance is changing or whether a comparative target has changed.

Disposal rates are considered to be a good baseline for comparison since it is common to all municipalities, while diversion programs differ in how they are operated and the materials they divert. Disposal, on the other hand, allows a municipality to measure the impact of all diversion and waste reduction programs without having to compare specifics in order to account for program variations.

### 2. Introduce Differential tipping fees for diverted materials at the landfill

Visitors to the County landfill would receive reduced tipping fees for materials that have been segregated and that can be diverted through the various diversion options at the appropriate locations at the site.

This may require the County to establish fees based on the overall system, and not determine tipping fees strictly based on the operating cost of each component in isolation. For example, the 2013 tipping fee rate for separated Construction and Demolition debris, which is diverted from the landfill, is \$65.00 per tonne. The tipping fee for garbage is \$65.24. The small difference between the two is not expected to encourage separation and diversion of C&D waste.

It is certainly not improper for the County to look at the strict operating costs for component parts, such as the landfill operation versus C&D management costs, and establish the fees. Establishing meaningfully different tipping fees to encourage source separation, however, will require the County to view costs as a whole such that total system costs continue to be recovered while fees for component parts are established to encourage desired behaviours. This might mean a slightly higher overall garbage tipping fee in favour of reduced (below cost) tipping fees for C&D waste and other materials that the County knows can be diverted from disposal if properly sorted.

The County has three (3) By-Laws that regulate disposal and transfer, namely:

- 4954-2008 - to regulate disposal and transfer facilities owned/or operated by the County;
- 4668-2006 - to regulate the per tonne rates for residential disposal; and
- 5147-2010 - to regulate the per tonne rates for construction and demolition material.

Respectively, these By-Laws govern how material is to be delivered to the site and how much it will cost to dispose of the material.

### 3. Expand PAYT Program to more businesses

The County could expand the PAYT program to include more small businesses (i.e. those with fewer than 10 employees and provide recycling as part of the service) whereby collecting from businesses could be undertaken if either quantities or requirements can be met by the generator.

The curbside collection of material from small businesses is not new, many communities offer collection services in downtown areas where residences are above local shops. However, any tonnage collected from these locations may need to be subtracted from the residential tonnage according to the rules governing the annual WDO Datacall. Regardless it may be reasonable to consider providing a uniform level of service to small businesses as is offered to the residential sector where the set out is equivalent to a residential curbside set out. This could either involve an increase or decrease in the level of service provided the level of service is consistent.

#### **4. Expand landfill bans**

Add new materials to current landfill ban for consistency with County diversion programs, including C&D materials, grass. Consideration of existing bans and what could be done in the future.

This Option is one where specific materials are designated as not being allowed to be set out for garbage collection (i.e. Blue Box recyclables would be prohibited from disposal, in the same way that hazardous or electronic waste is not permitted in the garbage).

The enactment of disposal bans has been shown to increase the participation in the recycling program but it requires a level of enforcement by the community. The preferred approach would be to support this Option with a public education campaign that reinforces the recycling program as a means to increase diversion and reduce overall waste management costs. In other words, a P&E or Outreach campaign would be put in place to remind residents that they have the means to fully participate in the various County diversion programs.

Assuming that the County has provided the residents with the “tools” to fully participate in the waste diversion programs, this Option would serve to reinforce and remind residents that they have the means to manage their waste.

Even without enforcement, this Option, is known to have an impact on recycling performance, and in conversations with various municipalities across Ontario, an increase of up to 10% in recycling capture rates has been shown. It is generally thought that there are people who, when they are made aware that such a ban exists, tend to abide with what they believe is the law.

Curbside enforcement and enforcement at the landfill can be accomplished in a number of ways by both contracted and County staff. Staff would almost certainly be able to detect, by sound or possibly by weight, the presence of, for example, Blue Box recyclables in the garbage stream. Staff could then, for instance, leave a notice at the property indicating that after a certain date, garbage set out for collection containing recyclable materials will no longer be collected. Some municipalities conduct targeted or seasonal audits of the garbage stream to assess its contents and compliance with the policy and to assess performance against their targets. Properly planned audits are those that include ensuring that proper personal protective equipment is worn when undertaking the work and include re-bagging or disposing of the contents after the audit has completed.

Applying a potential 10% increase in capture rates for this Option to the County’s current recovery would result in approximately 693 additional tonnes. If these additional tonnes were recovered, the County’s recovery rate would increase by approximately 1.8%.

#### **5. Negotiate a Shared Use Agreement for the Woodstock Transfer Station**

Where possible and practical, it is considered a best practice to enter into cooperation agreements with other jurisdictions so as to leverage the available tonnes of material so as to increase efficiency and lower program costs. This option suggests that the County explore the practicality and viability of using the City’s Blue Box transfer station as a means to potentially lower operating costs *for both parties*.

While there is likely no additional diversion potential by implementing of this option, this option does have the potential to increase the County’s annual funding that it receives from WDO and, could benefit the County with respect to potential transportation savings, provide an opportunity for joint tendering for recyclables processing and provide for collection synergies for collection contracts.

A cost benefit analysis should be performed to determine if the City’s existing transfer station can effectively manage the County’s (and South West Oxford’s) recyclable tonnage as currently constructed. The evaluation should consider operational processes and, if and where required, capital upgrades either to the site, building or equipment.

## 7.3 Options to be Explored through the Procurement Process

This Section discusses the options that the County can explore through the typical procurement processes, i.e. Request for Proposal (RFP). The County has historically separated its collection and processing contracts, both of which are set to expire at the end of April 2014. This Section outlines the steps the County should take in advance of issuing new collection and processing RFPs.

The development of RFPs is achieved via a balance between the client's, in this case the County's, "must haves" while allowing the waste management companies to bring their experience into the process and propose their most effective approaches. This is achieved by using current better practices in RFP and contract development.

Most notably, RFPs for processing and collection of recyclables should be split into separate processes. As the County has done this in the past and this is both a beneficial and productive approach, it is recommended that this approach continue as there are long term benefits for separating processing and collection in this way.

The approach of separating collection and processing RFPs was recommended in a report produced by the Ontario Waste Management Association (OWMA), February 2007 and requested by Stewardship Ontario as a companion document to the July 2007 KPMG Report, [Blue Box Program Enhancement and Best Practices Assessment Project](#). The OWMA document, entitled [Blue Box Residential Recycling Best Practices: A Private Sector Perspective](#), includes the following statement on page 13:

*Under no circumstances should collection and processing contracts be combined; smaller companies cannot meet the requirements of a large MRF contract but can do a fine job, at a competitive price, for collection and simpler forms of processing. The participation of smaller firms is vital for a healthy competitive market.*

A similar statement is made in the July 2007 KPMG Report on page 51 and is as follows:

*With respect to recycling collection and processing, the leading practice is to structure the procurement process to allow for separate contracting for collection and processing when feasible. This stimulates competition by encouraging collection contractors, who may not be able to bid on a MRF, to provide good service at competitive prices on the collection process. With this approach, it is most desirable to handle the procurement process for processing in advance of collection, or to specify the MRF location, so that collection service providers will know where the MRF will be located and structure their proposals/bids accordingly.*

This approach, along with a number of other principles to promote competition and assure that the RFPs are structured correctly and contain clearly defined requirements for the prospective Proponents, is recommended. Specifically:

- To make sure the information such as tonnes, households, level of service, etc are presented in the RFPs accurately;
- The collection RFP, when issued after the processing specifications are confirmed, allows collection contractors to focus their proposals on collection service by removing the processing variable. This facilitates an "apples-to-apples" comparison resulting in less variation based on different processing specifications. In addition, using this method results in no hidden mark-ups or fees as a by-product of collectors being responsible for arranging the processing aspect of the work since this element is predetermined and the rates and procedures are already established; and
- The proposal evaluation matrices be developed and approved (internally) for both processing and collection RFPs before they are issued as this helps with the review and evaluating the received proposals.

### Procurement Process Overview

This section outlines the basic principles as to how RFP's should be structured such that competitive, well-structured bids are received. In this section, the key approaches are discussed.

There are a number of objectives and principles that guide the development of an effective RFP, including:



- Allowing for the opportunity of effective promotion and education;
- Maximizing cost effectiveness;
- Maximizing recovery;
- Allowing bidders enough flexibility to propose efficient ways to provide services;
- Prescribing key service elements and levels;
- Providing structure that will be easy to evaluate;
- Providing information that will permit bidders to submit well-informed bids;
- Protecting the interests of the County and the local municipalities; and
- Attracting competitive bids that result in favourable pricing and to establish a “win-win” situation between the County and prospective bidders.

In so doing, the County is communicating its desire to receive the best possible service for the best possible price while providing the prospective bidders with clear and fair terms from which they can prepare their proposal. The resulting RFP's should, in effect, take full advantage of the County's economies-of-scale.

### Multi-municipal Planning Approach

This aspect has two (2) components, namely: identifying if using City's transfer station for Blue Box recyclables is viable and if so, consider jointly issuing a Blue Box processing RFP with the City and South-West Oxford for Blue Box material processing. This would be followed by a joint collection contract for garbage and recycling with the City and South West Oxford.

July 2007 KPMG Report, Blue Box Program Enhancement and Best Practices Assessment Project, supports a multi-municipal planning and procurement approach and cites this approach as a fundamental best practice. While the report focuses strictly on blue box recycling, the main principles apply to the procurement of all waste collection services and in practice this has been the case. While it is recognized as being politically sensitive, this means that South-West Oxford, Woodstock and the County should explore the economic and potential service benefits of joint tendering. Results vary but some municipalities have benefited from an increase in service levels and a reduction in cost by tendering jointly. Participating municipalities often enter the partnership on a “provisional” basis, in other words they retain the option to negotiate separate contracts should the process not result in service gains or lower costs.

The first step, noted in Section 7.2 of this report, would be that the County engage with the City of Woodstock to determine if the use of their transfer station is a viable option for the County. If the County and City can agree that the transfer station could be the location to where the County's Blue Box recyclables are to be delivered to, this can be articulated in the recycling collection and processing RFPs.

Should the Term of the City's agreement for Blue Box processing expire near the time of the County's current contract (2014) and if the County and City can agree for shared usage of the City's transfer station, a joint Blue Box processing RFP could be prepared. Concurrently, the County should engage in dialogue with South-West Oxford to determine if the County can upload the service from the local municipality.

As one of the WDO Datacall Best Practice questions, a multi-municipal planning approach, such as shared infrastructure and service delivery, has multiple benefits including:

- Harmonized Promotion and Education insofar as if the County's material is delivered to the City's facility, the same materials should be accepted and as such, a uniform communication message can be made; and
- Lower unit costs as a result of greater economies of scale and consolidation of contract administration.

If the County and City can agree to terms on a formal agreement for the joint usage of the City's transfer station, and the County, City and South-West Oxford can agree to jointly issue Blue Box processing RFP, this would serve to harmonize service delivery across the County, harmonize P&E materials and lower overall costs.

Assuming the above items were agreed to, the next step would be to prepare the Blue Box processing RFP which could include identifying the City's transfer station as the location from where the collected

Blue Box recyclables would be transferred from to the processor. Prepared and issued separately, each will identify the respective services required.

Concurrently with the negotiations with the City and South-West Oxford for Blue Box processing services, the County should determine their interest with respect to the provision of a program to divert Source Separated Organics (SSO). Similar to the provision of a joint Blue Box processing RFP, a joint SSO processing RFP would serve to “pooling” the available SSO tonnage thereby achieving greater economies of scale which would likely result in better pricing than if each were to seek the services separately.

For example, in a multi-municipal RFP process, the per tonne processing costs (including transfer and haulage) for Blue Box recyclables and SSO can range from approximately \$80 to \$110;

As well, the per tonne collection costs can range from approximately \$1 to \$2 per household for curbside collection of Garbage, Recyclables and SSO.

#### Other Program Options Investigate Through the Procurement Process

The RFP process opens the opportunity to determine the feasibility and benefits of collecting Source Separated Organics (SSO), commonly referred to as a Green Cart program. As the County currently does not have an SSO program, the purpose of issuing an SSO processing RFP would be to determine the actual, real world rates that the County could incur to enable County Council to make an informed decision as to whether or not to offer the service. Regarding the SSO processing RFP, the document could be structured in such a way to allow Council the opportunity defer a decision until such time as the SSO collection costs are known.

In the case of Garbage and Yard Waste, processing RFP's need not be issued as the material would be tipped at the County's landfill and composting areas respectively. Other materials, such as Bulk Waste and White Goods, could also be identified as to be taken to either the County's landfill or to a third-party disposal or recycling facility (such as a scrap metal recycler); these, however, can be managed effectively through the collection RFP.

Once the separate Blue Box and SSO processing RFP's have been evaluated and awarded (or temporarily deferred, as might be SSO processing until collection figures are proposed), the resulting terms and conditions from each would be incorporated into the subsequent collection RFP.

#### Processing RFP's

The Blue Box processing RFP should include a variety of options so as to explore the potential costs, potential revenues and diversion potential of each. For example:

- Requesting bids for both single or dual stream processing; and

Cost ranges for SSO collection and processing vary and the bidding process will establish whether processing capacity exists and then true processing and collection costs. Based on recent contract data programs operate around \$45 per household annually.

Several municipalities have offset SSO cost by adjusting garbage collection frequency to every other week. They are able to do this because SSO, in concert with a good Blue Box program, a) reduces weekly garbage to a minor volume, and b) the remaining garbage contains very little organic waste. A group of six municipalities in York Region, as part of a joint tender, added weekly SSO collection but reduced garbage collection frequency to every other week and each realized annual savings ranging from \$100,000 to \$150,000 over the seven year contract. Halton Region also reduced garbage collection frequency when SSO collection was introduced.

It is recommended that the County use the upcoming procurement process to explore Source-Separated Organics (SSO) collection, often referred to as the green cart program.

SSO represents the largest remaining divertible component of the residential waste stream in Oxford County. Based on collection volumes in other municipalities and adjusted for population, collected volumes in the County could

- Requesting information on the acceptable material types (i.e. can the material be delivered bagged, are materials such as plastic film, Expanded Polystyrene or aerosol cans acceptable).

The SSO processing RFP should also request information and pricing on a number of options including:

- The acceptable delivery method (i.e. in a plastic bag or compostable bag or no bag); and
- The acceptable material types (i.e. pet waste, diapers).

### Collection RFP

Once the Blue Box and SSO processors are known, the County will know the specifics related to acceptable material types, the number of streams required (i.e. single or dual stream Blue Box recyclables), the acceptable delivery methods, etc. This information would then be clearly articulated in the Collection RFP to ensure that all bidders understand the County's requirements.

The collection RFP could be structured so that bidders can propose:

- Co-collection options (i.e. Blue Box and SSO or Blue Box and Garbage or SSO and Garbage);
- Weekly Blue Box and SSO collection; and
- Biweekly Garbage collection.

As well, the County may wish to pursue pricing for automated collection for the curbside materials. This would involve structuring the RFP to enable bids to be received for the collection of Garbage, Recyclables and SSO using automated carts.

With respect to collection frequency, specific scenarios should be requested to ensure the best possible bids are received and the County can make an informed decision as to the most favourable option. While the number of scenarios can be large, it is recommended that a few scenarios be included to reduce the complexity of the evaluation process. For example:

1. Four (4) day per week collection schedule encompassing:
  - A. Weekly collection of Blue Box & SSO and bi-weekly collection of Garbage; and
  - B. Weekly collection of these material types.
2. Five (5) day per week collection schedule encompassing:
  - A. Weekly collection of Blue Box & SSO and bi-weekly collection of Garbage; and
  - B. Weekly collection of these material types.

Typically, Yard Waste, Bulk Waste and White Goods require less frequent collection than Blue Box, SSO and Garbage. Practices in other municipalities tend to support this view and the collection RFP can be structured to reflect this.

It is also recognized that there are differences in collection requirements between urban and rural residents when it comes to Yard Waste. To ensure an effective and efficient program, the RFP could consider Yard Waste collection in the urban areas and optional pricing for rural collection.

Unlike Yard Waste, Bulk Waste and White Goods are generated by all residents year-round and on-property management is likely not an option for most residents. The collection frequency depends, in large part, on the quantity of material requiring collection. As Bulk Waste and White Goods comprise a small fraction of the County's waste stream, the RFP could request a few options for collection frequency to ensure the best possible price is obtained for the level of service required.

### Collection Areas

A collection RFP is an opportunity to let the experts in collection logistics, namely the waste collection companies, define the collection areas that will yield maximum efficiencies with respect to routing and day-of-the-week collections. In particular, if consideration is given to a four day per week collection schedule in, for example the urban areas, this would alleviate the need for collections on Saturday's as a result of statutory holidays.

In discussion with other jurisdictions, it is generally agreed that collection areas do not need to be constrained by existing municipal boundaries, and that it may be counterproductive to do so. While there are always concerns that people don't like change, such as a change to one's garbage day, the E-survey responses tend to support change if there is a cost benefit. Changing a collection days is not new and is

commonly experienced as a result of growth and program additions, and municipalities who proactively publicize and explain such changes in advance are generally successful in making the transition.

Inter-municipal collection can maximize the collection contractor's utilization of their vehicles and possibly reduce the overall cost to the County.

While single family curbside collection is a given for the RFP, the County is encouraged to explore the opportunities related to implementing collection for residents in the multi-residential sector. The RFP should define the locations for multi-residential collection and request a separate pricing to be submitted.

### Contract Incentives

An integral part of both the processing and collection RFP is to establish a "win-win" contract; the day-to-day performance of the collection contractor will be a major component of the contract management activities.

Typically, RFP's and/or the operating contracts include penalty clauses designed to protect the municipality from under-performing contractors. However, to compensate for possible, future financial liability, contractors mitigate this risk by increasing the price of their bid. This results in the municipality paying more for the service than is necessary. A method to reduce costs is to include bonus clauses.

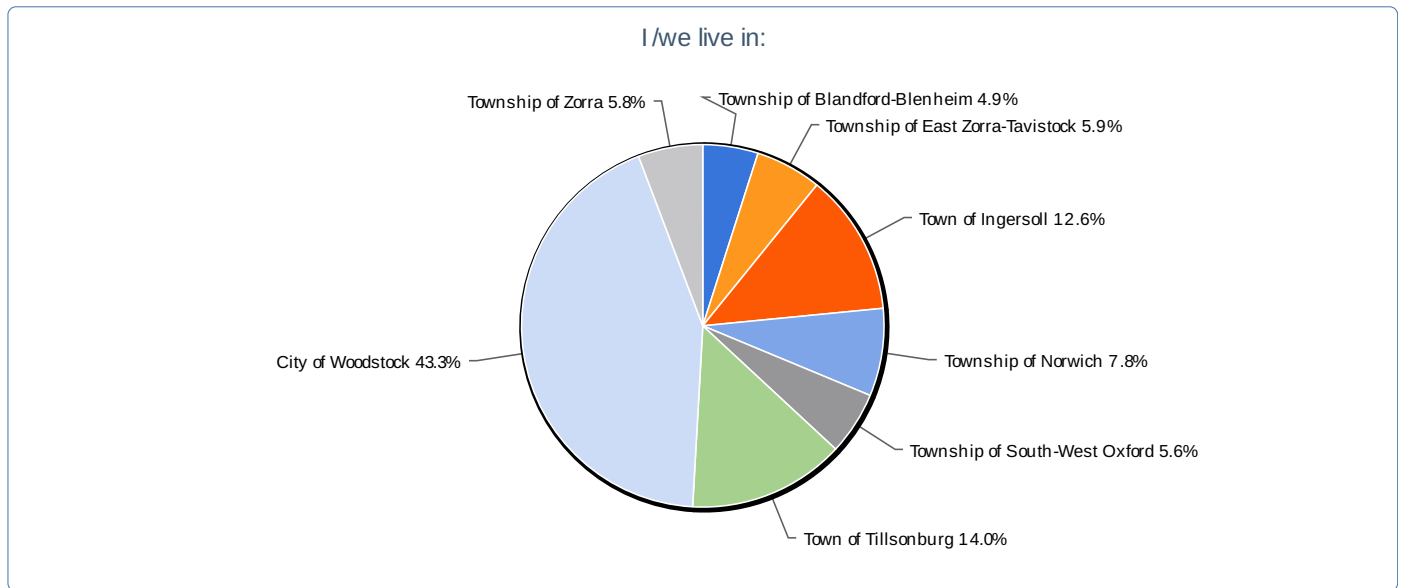
Bonus and penalty clauses serve as both the "carrot" and the "stick". These clauses are structured with clear and well defined metrics to prevent "grey" areas or room for dispute. Depending on how these are structured and based on the assessment of the contractor's performance, the contractor would either be eligible to receive a bonus for meeting or exceeding the performance or be liable for penalties by failing to provide the service required.

While the actual RFP may include the operating contract, it is also possible that the County may elect to prepare the contract after the RFP has been awarded. Either way, the contract should clearly define roles and responsibilities as it relates to performance measurement.

## Appendix E Electronic Survey Number 1

## Summary Report - March 21, 2012

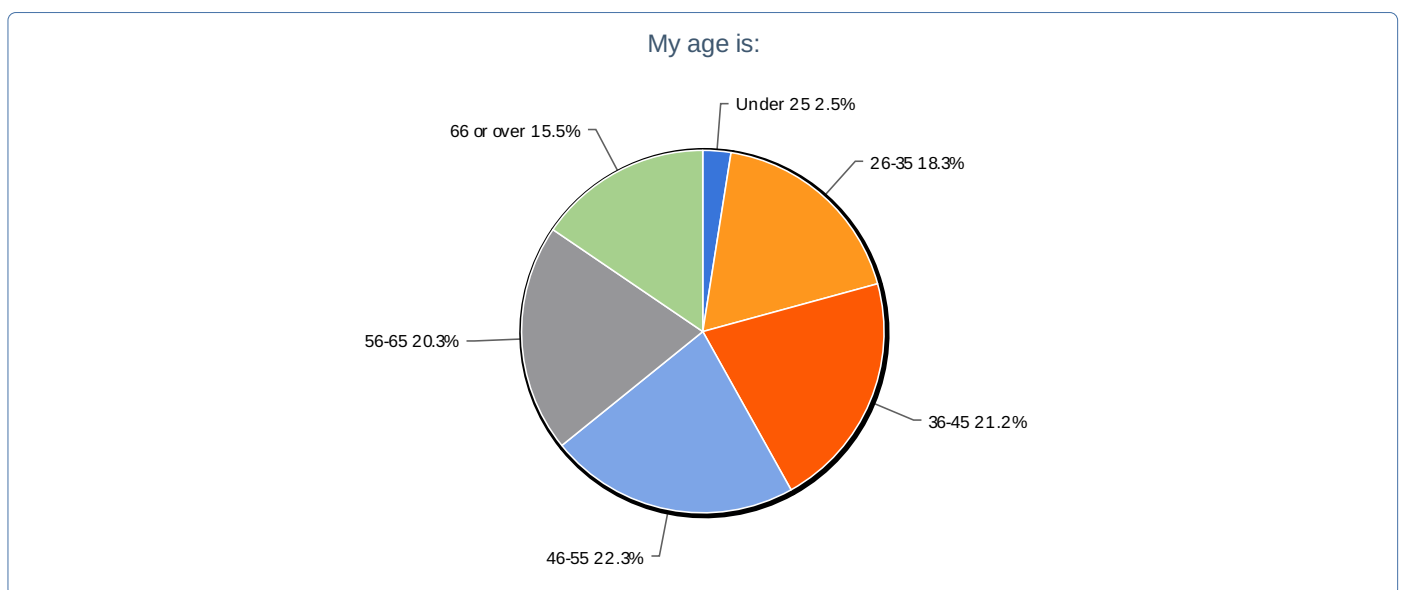
Survey: Oxford County Integrated Waste Management Plan Survey



### 1. I/we live in:

Value	Count	Percent %
Township of Blandford-Blenheim	36	4.9%
Township of East Zorra-Tavistock	43	5.9%
Town of Ingersoll	92	12.6%
Township of Norwich	57	7.8%
Township of South-West Oxford	41	5.6%
Town of Tillsonburg	102	14%
City of Woodstock	316	43.3%
Township of Zorra	42	5.8%

Statistics	
Total Responses	729



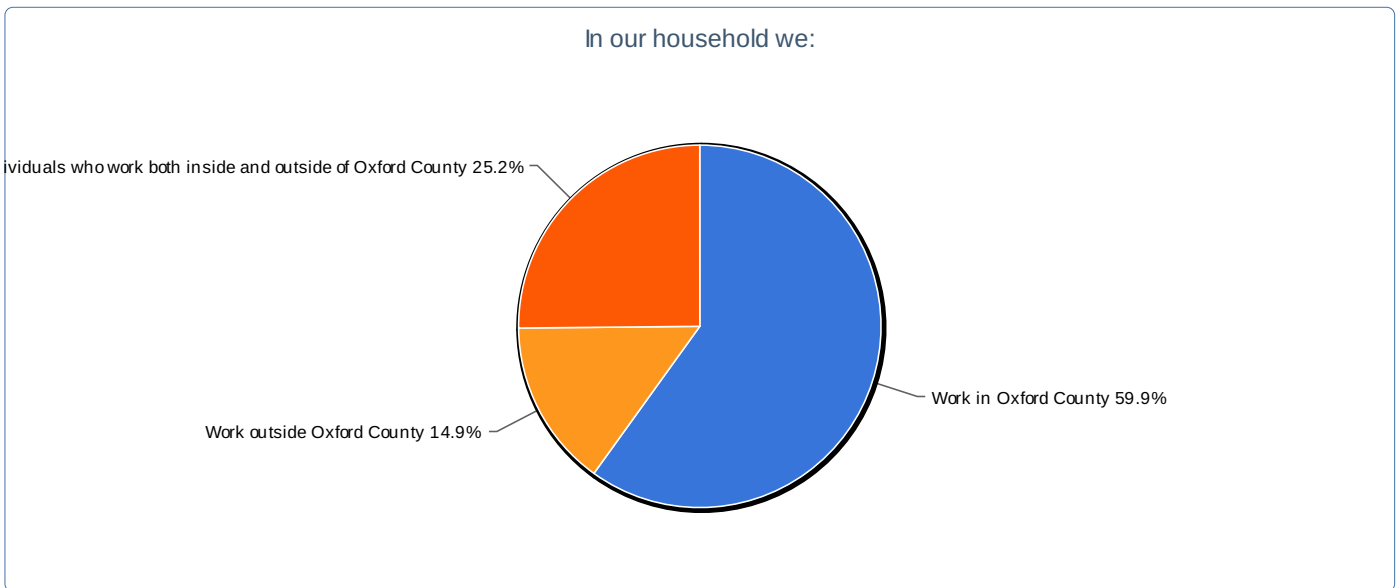
### 2. My age is:

Value	Count	Percent %
Under 25	18	2.5%

Statistics	
Total	729

26-35	132	18.3%
36-45	153	21.2%
46-55	161	22.3%
56-65	147	20.3%
66 or over	112	15.5%

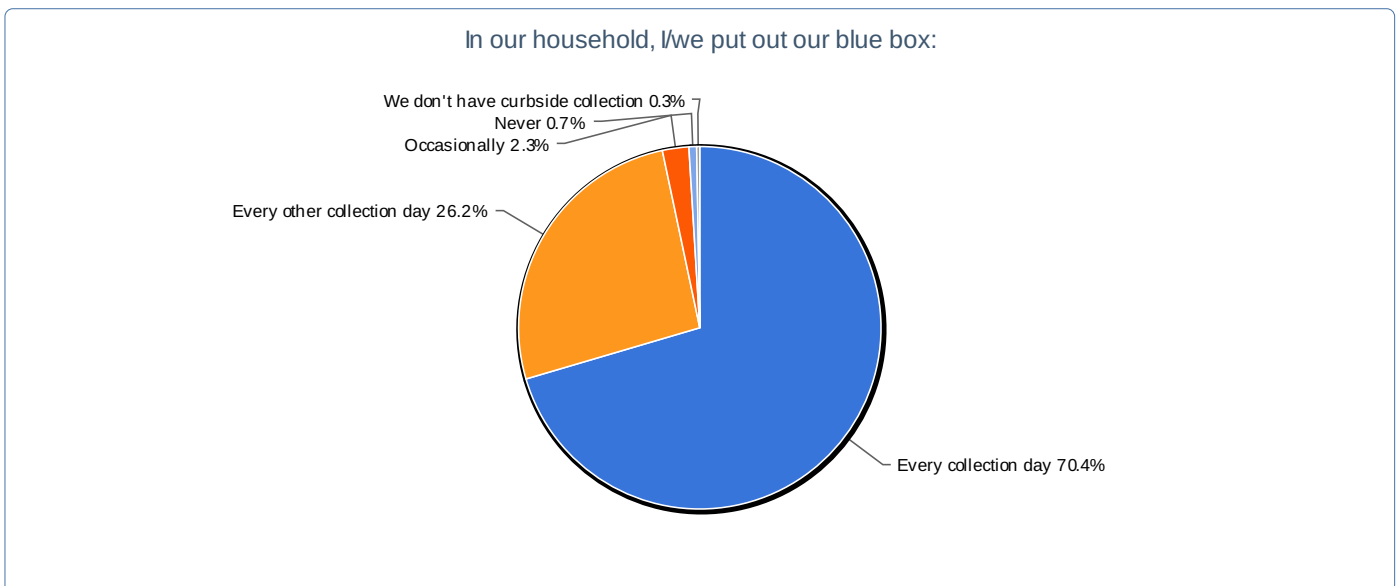
Responses	723
Sum	31,970.0
Average	45.3
StdDev	13.44
Max	66.0



### 3. In our household we:

Value	Count	Percent %
Work in Oxford County	386	59.9%
Work outside Oxford County	96	14.9%
Have individuals who work both inside and outside of Oxford County	162	25.2%

<b>Statistics</b>	
Total Responses	644



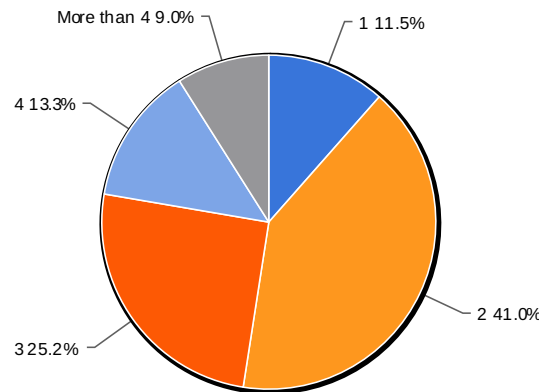
### 4. In our household, I/we put out our blue box:

Value	Count	Percent %
Every collection day	510	70.4%
Every other collection day	190	26.2%
Occasionally	17	2.3%
Never	5	0.7%

<b>Statistics</b>	
Total Responses	724



Our household has the following number of regular-sized Blue Boxes (or equivalent) which we put out every collection day.

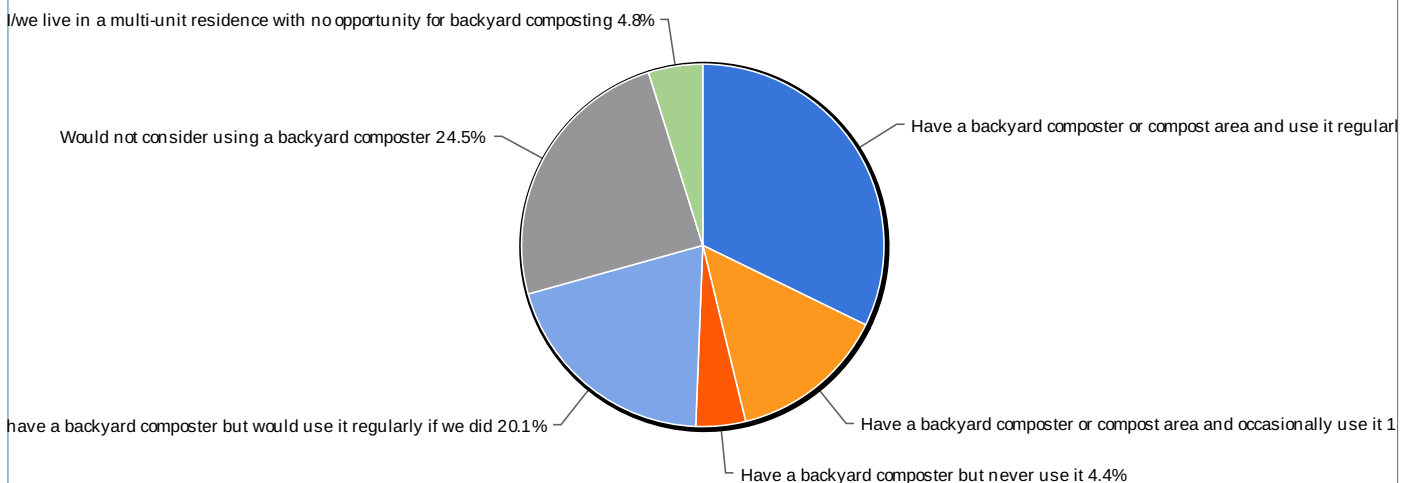


**5. Our household has the following number of regular-sized Blue Boxes (or equivalent) which we put out every collection day.**

Value	Count	Percent %
1	82	11.5%
2	292	41%
3	180	25.2%
4	95	13.3%
More than 4	64	9%

Statistics	
Total Responses	713
Sum	1,586.0
Average	2.4
StdDev	0.89
Max	4.0

With respect to kitchen waste in our household, I/we:



**6. With respect to kitchen waste in our household, I/we:**

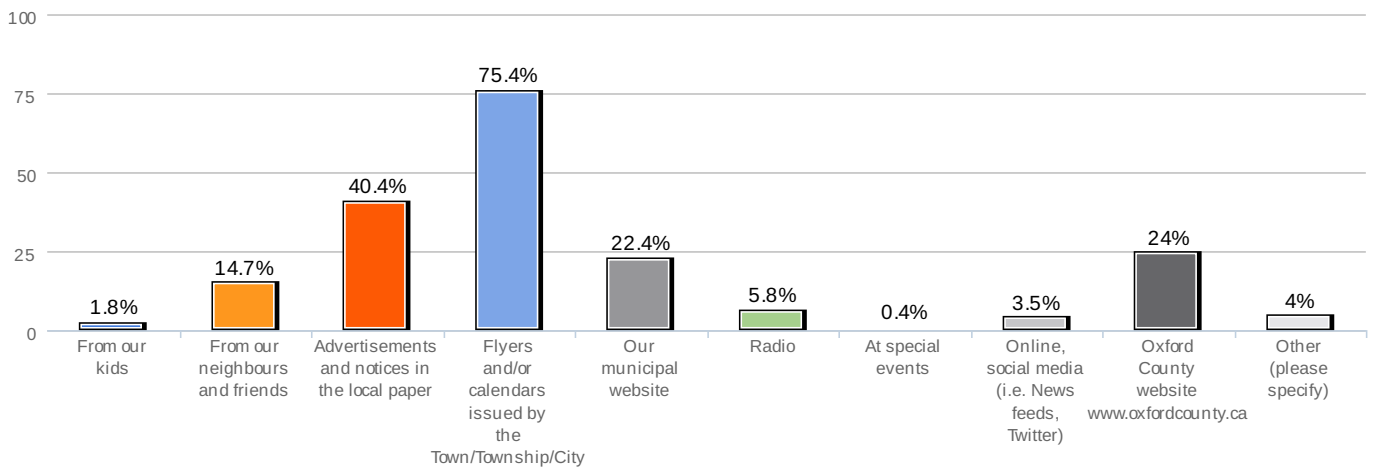
Value	Count	Percent %
Have a backyard composter or compost area and use it regularly	233	32.2%
Have a backyard composter or compost area and occasionally use it	101	14%
Have a backyard composter but never use it	32	4.4%
Don't have a backyard composter but would use it regularly if we did	145	20.1%
Would not consider using a backyard composter	177	24.5%

Statistics	
Total Responses	723

I/we live in a multi-unit residence with no opportunity for backyard composting

35 4.8%

I/we currently get information about garbage and recycling from (check all those that apply):

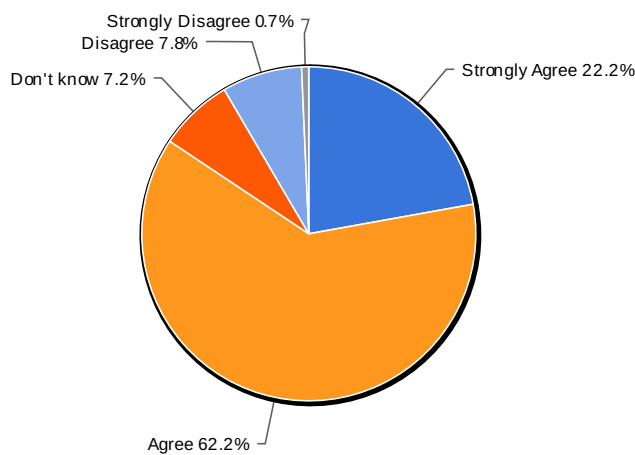


**7. I/we currently get information about garbage and recycling from (check all those that apply):**

Value	Count	Percent %
From our kids	13	1.8%
From our neighbours and friends	106	14.7%
Advertisements and notices in the local paper	291	40.4%
Flyers and/or calendars issued by the Town/Township/City	543	75.4%
Our municipal website	161	22.4%
Radio	42	5.8%
At special events	3	0.4%
Online, social media (i.e. News feeds, Twitter)	25	3.5%
Oxford County website www.oxfordcounty.ca	173	24%
Other (please specify)	29	4%

Statistics	
Total Responses	720

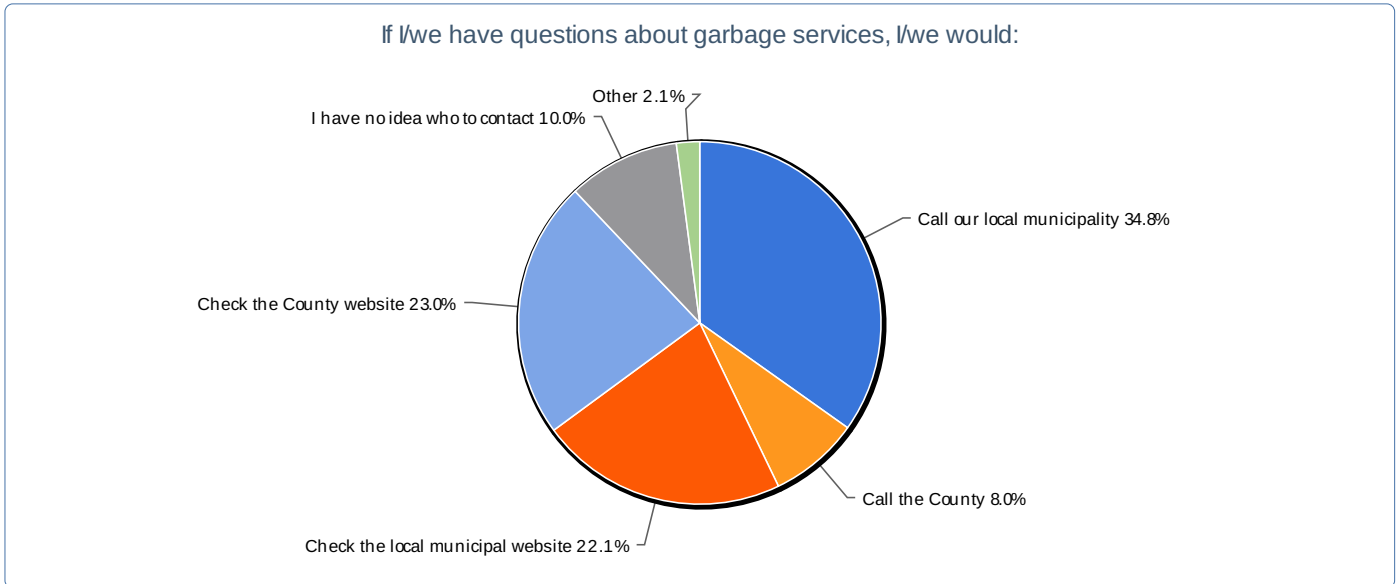
The Waste Management Calendar clearly identifies the materials accepted as part of your blue box recycling program.



**8. The Waste Management Calendar clearly identifies the materials accepted as part of your blue box recycling program.**

Value	Count	Percent %
Strongly Agree	160	22.2%
Agree	449	62.2%
Don't know	52	7.2%
Disagree	56	7.8%
Strongly Disagree	5	0.7%

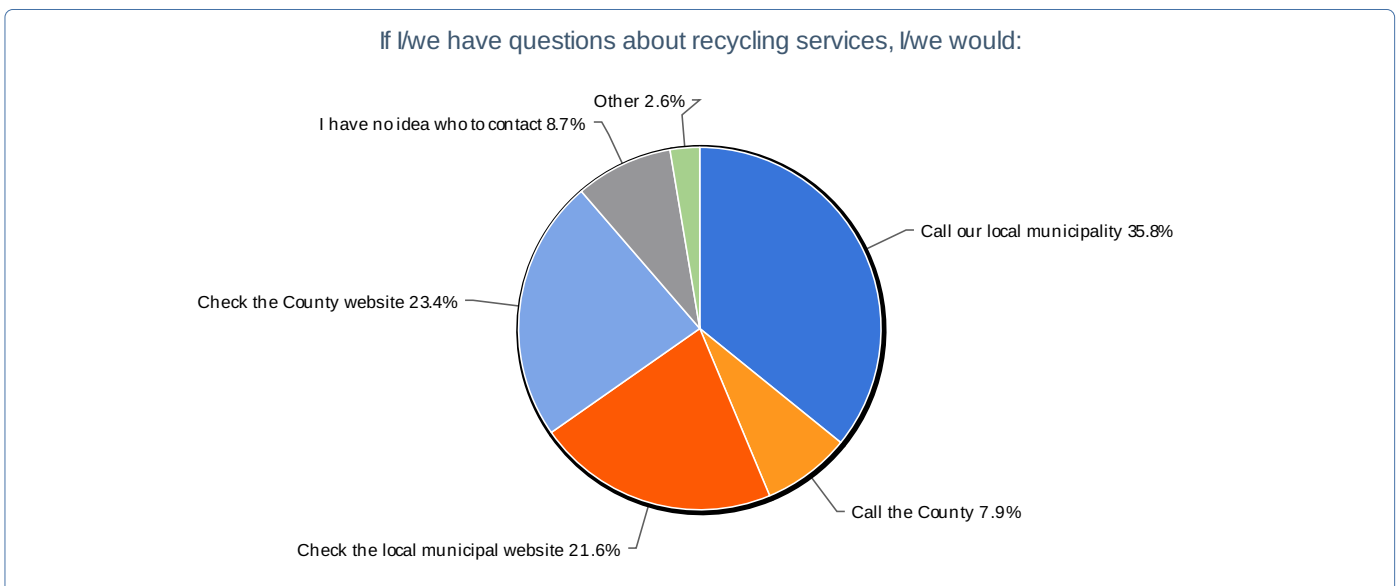
Statistics	
Total Responses	722



**9. If I/we have questions about garbage services, I/we would:**

Value	Count	Percent %
Call our local municipality	251	34.8%
Call the County	58	8%
Check the local municipal website	159	22.1%
Check the County website	166	23%
I have no idea who to contact	72	10%
Other	15	2.1%

Statistics	
Total Responses	721



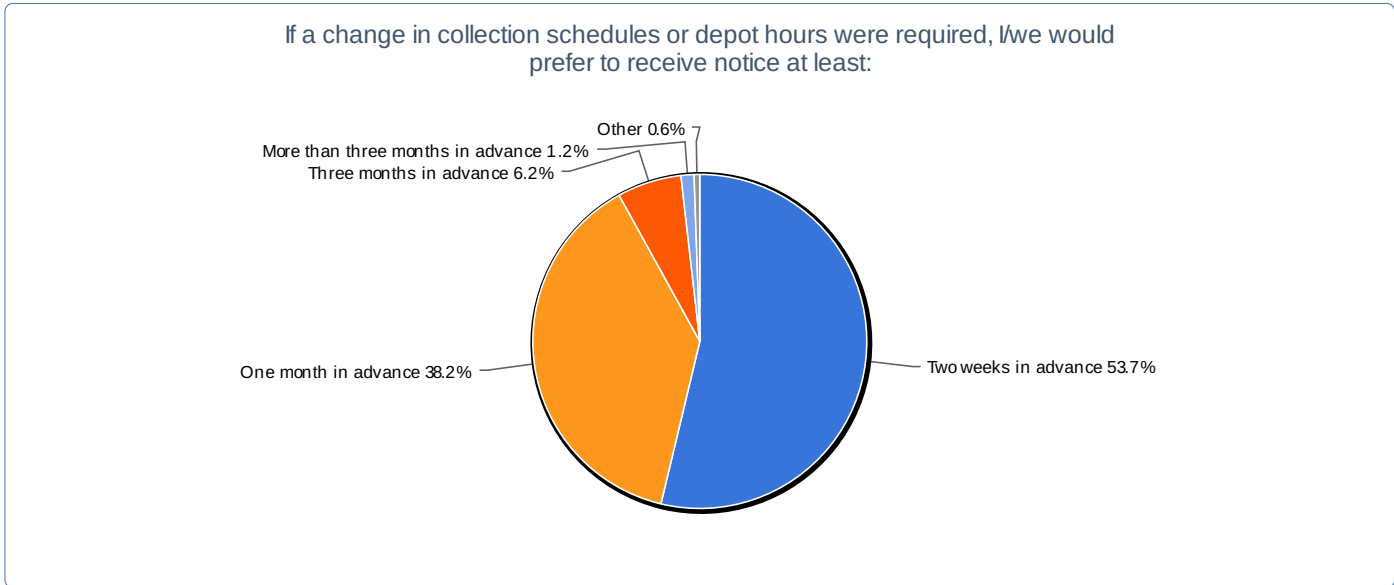
**10. If I/we have questions about recycling services, I/we would:**

Value	Count	Percent %
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Statistics	
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Call our local municipality	259	35.8%
Call the County	57	7.9%
Check the local municipal website	156	21.6%
Check the County website	169	23.4%
I have no idea who to contact	63	8.7%
Other	19	2.6%

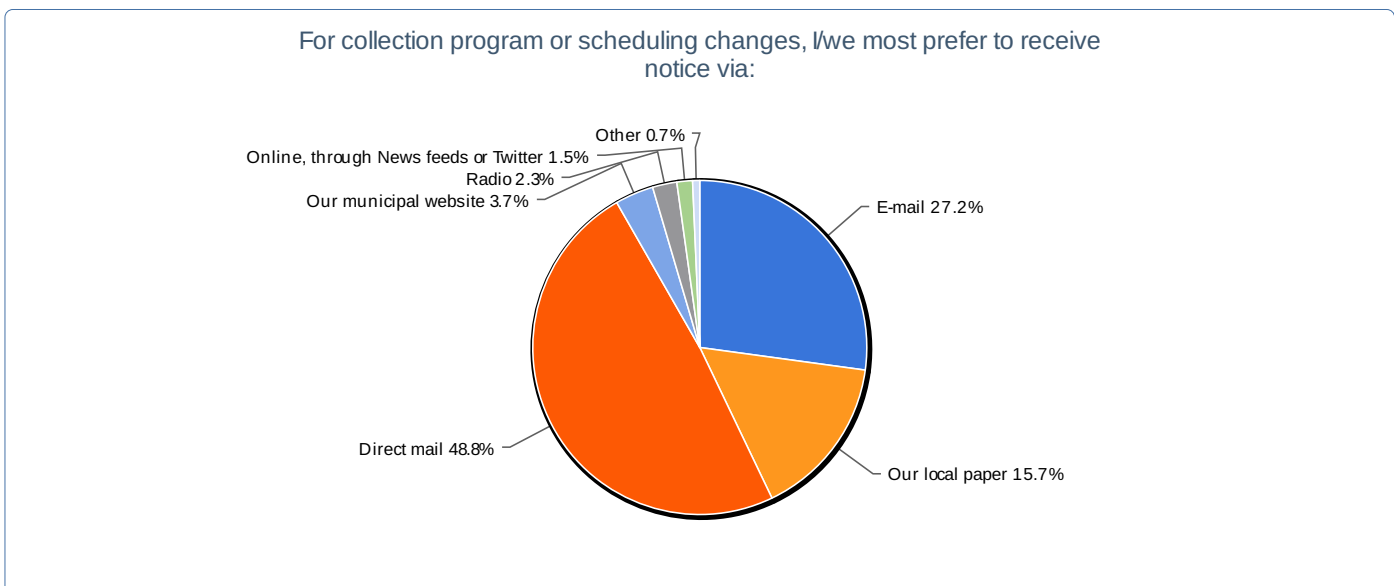
Total Responses	723
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**11. If a change in collection schedules or depot hours were required, I/we would prefer to receive notice at least:**

Value	Count	Percent %
Two weeks in advance	388	53.7%
One month in advance	276	38.2%
Three months in advance	45	6.2%
More than three months in advance	9	1.2%
Other	4	0.6%

Statistics	
Total Responses	722



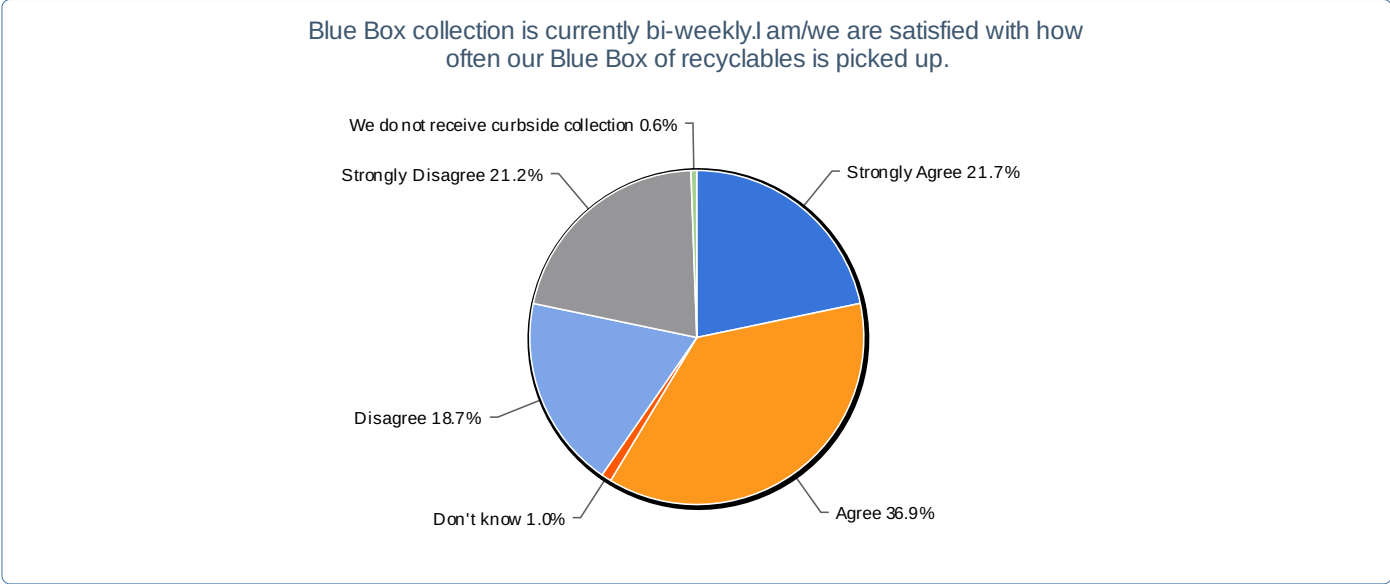
**12. For collection program or scheduling changes, I/we most prefer to receive notice via:**

Value	Count	Percent %
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Statistics	
------------	--

E-mail	197	27.2%
Our local paper	114	15.7%
Direct mail	354	48.8%
Our municipal website	27	3.7%
Radio	17	2.3%
Online, through News feeds or Twitter	11	1.5%
Other	5	0.7%

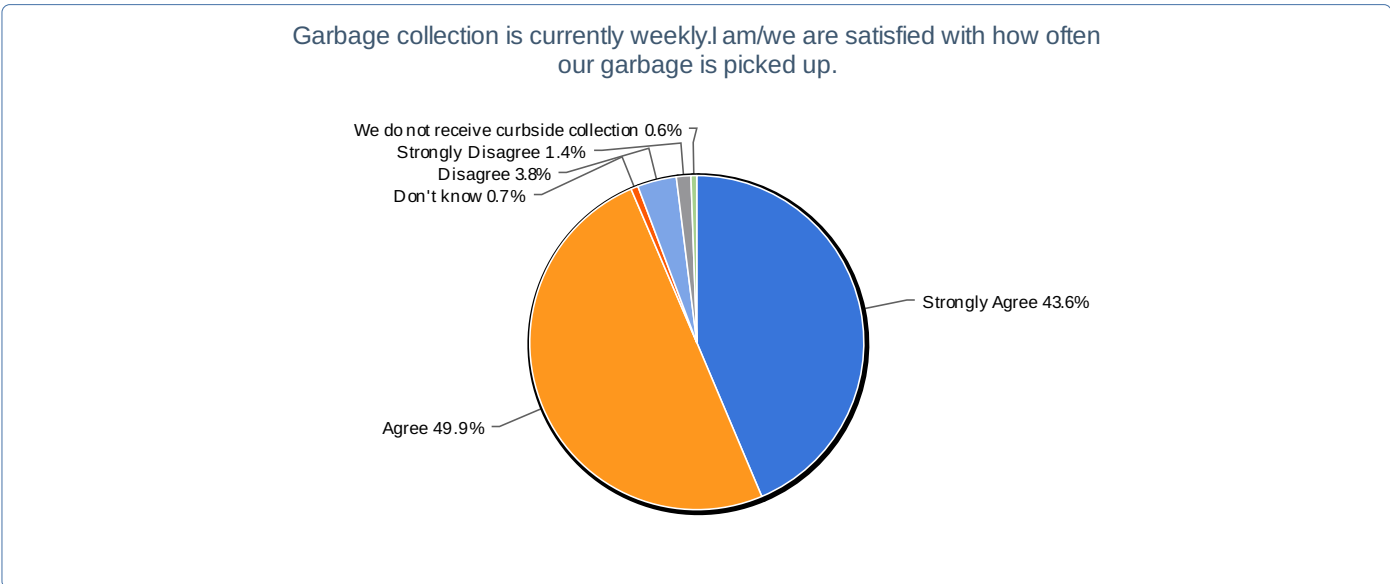
Total Responses	725
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**14. Blue Box collection is currently bi-weekly. I am/we are satisfied with how often our Blue Box of recyclables is picked up.**

Value	Count	Percent %
Strongly Agree	156	21.7%
Agree	265	36.9%
Don't know	7	1%
Disagree	134	18.7%
Strongly Disagree	152	21.2%
We do not receive curbside collection	4	0.6%

Statistics	
Total Responses	718

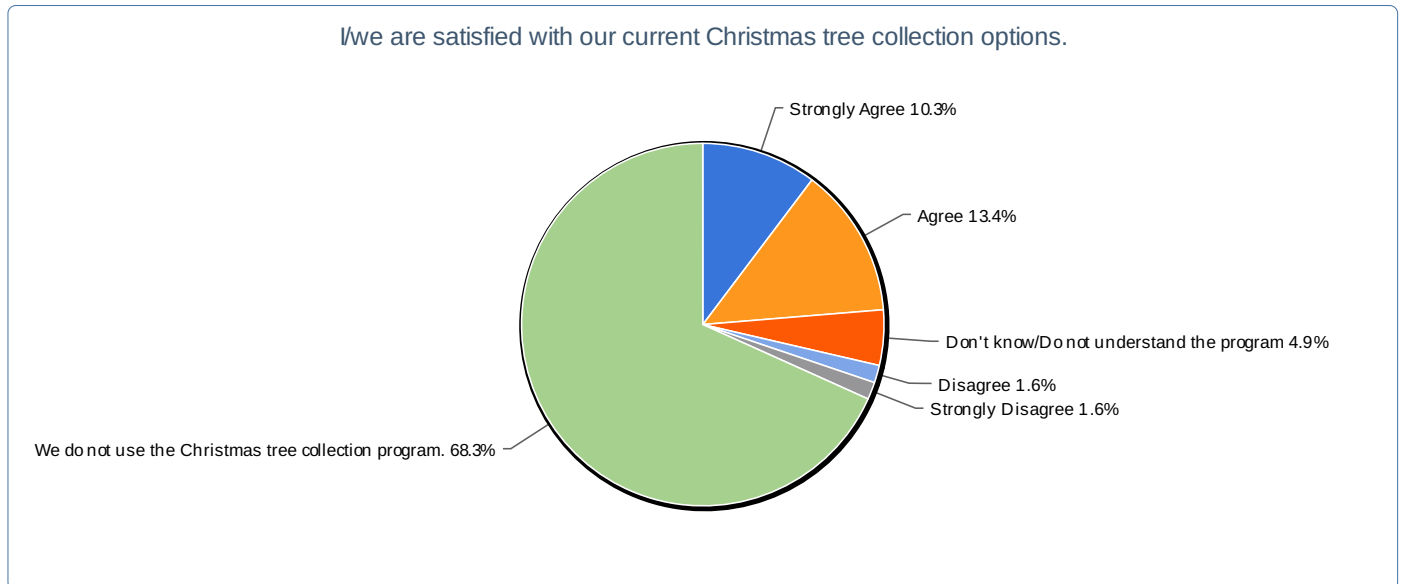


**15. Garbage collection is currently weekly. I am/we are satisfied with how often our garbage is**

**picked up.**

Value	Count	Percent %
Strongly Agree	312	43.6%
Agree	357	49.9%
Don't know	5	0.7%
Disagree	27	3.8%
Strongly Disagree	10	1.4%
We do not receive curbside collection	4	0.6%

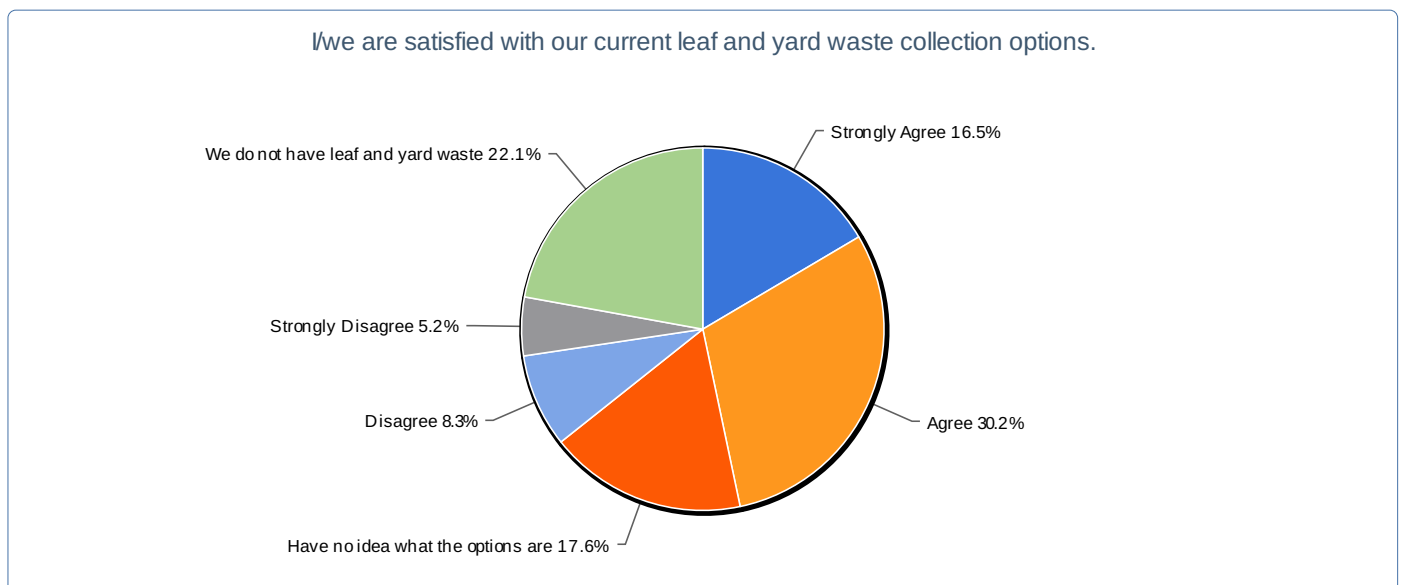
Statistics	
Total Responses	715



**16. I/we are satisfied with our current Christmas tree collection options.**

Value	Count	Percent %
Strongly Agree	73	10.3%
Agree	95	13.4%
Don't know/Do not understand the program	35	4.9%
Disagree	11	1.6%
Strongly Disagree	11	1.6%
We do not use the Christmas tree collection program.	484	68.3%

Statistics	
Total Responses	709



**17. I/we are satisfied with our current leaf and yard waste collection options.**

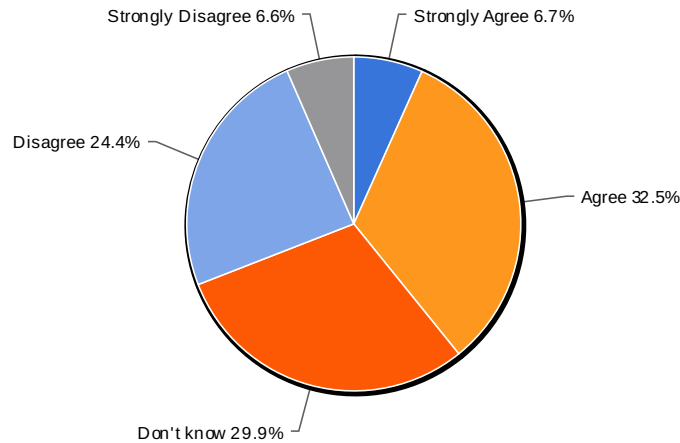
Value	Count	Percent %
Strongly Agree	117	16.5%
Agree	214	30.2%
Have no idea what the options are	125	17.6%
Disagree	59	8.3%
Strongly Disagree	37	5.2%
We do not have leaf and yard waste	157	22.1%

Statistics	
Total Responses	709

**19. Thinking about the way the municipality delivers waste and waste diversion programs for the people who live here, please rate the importance of the following service elements:**

	Very Important	Important	Not Important	Responses
<b>Convenience: How easy it is to deal with your garbage and recycling</b>	<b>66.8%</b> 465	<b>31.9%</b> 222	<b>1.3%</b> 9	696
<b>Cost effectiveness: How expensive the waste management system is to run</b>	<b>54.3%</b> 377	<b>43.1%</b> 299	<b>2.6%</b> 18	694
<b>High recovery of recyclables: Diverting a high number of recyclables from landfill sites</b>	<b>77.2%</b> 535	<b>20.9%</b> 145	<b>1.9%</b> 13	693
<b>Reliability and consistent service: How satisfied you are with curbside collection and other types of collection such as depots</b>	<b>63.3%</b> 439	<b>35.8%</b> 248	<b>0.9%</b> 6	693

Our community is doing enough to divert waste from disposal (reducing the amount of garbage that ends up in a landfill) through its diversion programs.



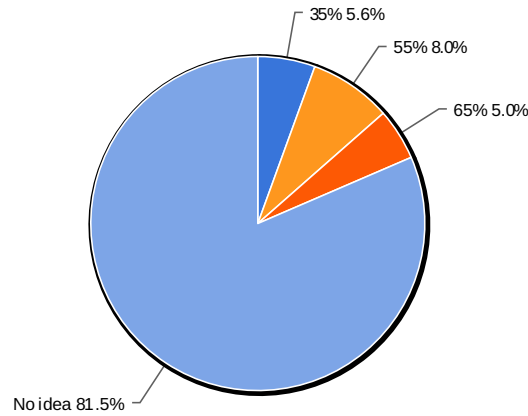
**20. Our community is doing enough to divert waste from disposal (reducing the amount of garbage that ends up in a landfill) through its diversion programs.**

Value	Count	Percent %
Strongly Agree	47	6.7%
Agree	228	32.5%
Don't know	210	29.9%
Disagree	171	24.4%
Strongly Disagree	46	6.6%

Statistics	
Total Responses	702



My understanding of our current County waste diversion rate as compared to the Provincial strategy of 60% is:

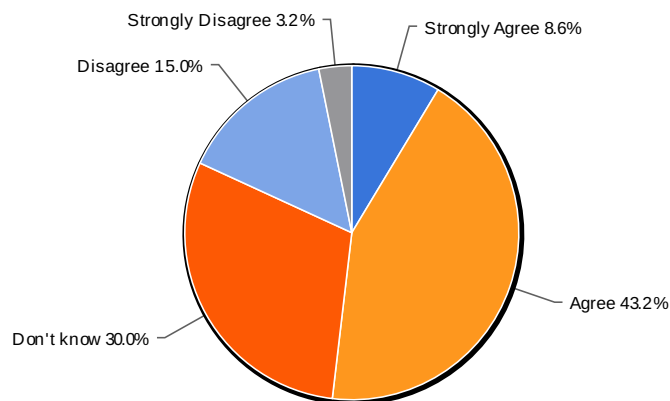


**21. My understanding of our current County waste diversion rate as compared to the Provincial strategy of 60% is:**

Value	Count	Percent %
35%	39	5.6%
55%	56	8%
65%	35	5%
No idea	572	81.5%

Statistics	
Total Responses	702
Sum	6,720.0
Average	51.7
StdDev	11.66
Max	65.0

The current recycling program is effective in diverting recyclable material from disposal (not sending it to a landfill site).

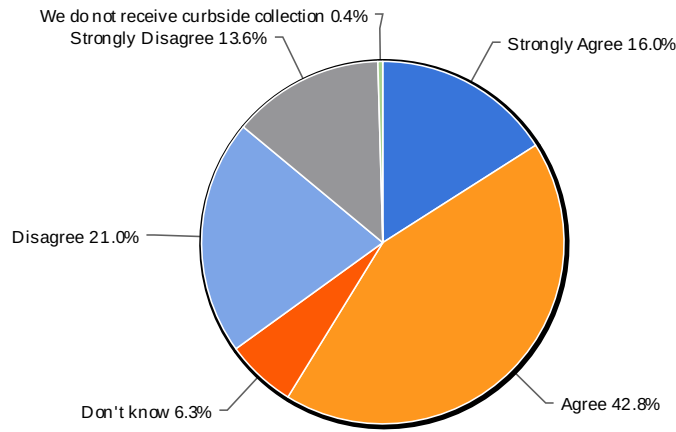


**22. The current recycling program is effective in diverting recyclable material from disposal (not sending it to a landfill site).**

Value	Count	Percent %
Strongly Agree	60	8.6%
Agree	300	43.2%
Don't know	208	30%
Disagree	104	15%
Strongly Disagree	22	3.2%

Statistics	
Total Responses	694

The bag tag system encourages residents to reduce, re-use, and recycle.

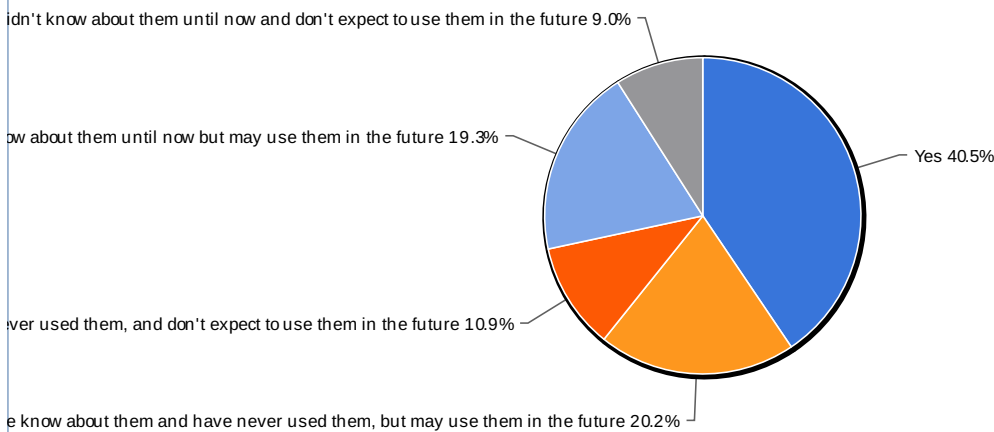


**23. The bag tag system encourages residents to reduce, re-use, and recycle.**

Value	Count	Percent %
Strongly Agree	112	16%
Agree	300	42.8%
Don't know	44	6.3%
Disagree	147	21%
Strongly Disagree	95	13.6%
We do not receive curbside collection	3	0.4%

Statistics	
Total Responses	701

Oxford County offers free recycling depots located at the landfill site (east of the Village of Salford on Salford Road) including those for blue box material, household hazardous waste, electronics, tires and leaf and yard waste. Have you used these depots?



**24. Oxford County offers free recycling depots located at the landfill site (east of the Village of Salford on Salford Road) including those for blue box material, household hazardous waste, electronics, tires and leaf and yard waste. Have you used these depots?**

Value	Count	Percent %
Yes	283	40.5%
We know about them and have never used them, but may use them in the future	141	20.2%
We've never used them, and don't expect to use them in the future	76	10.9%
We didn't know about them until now but may use them in the future	135	19.3%
We didn't know about them until now and don't expect to use them in the future	66	9.0%

Statistics	
Total Responses	698

I/we didn't know about them until now and don't expect to use them in the future

63

9%

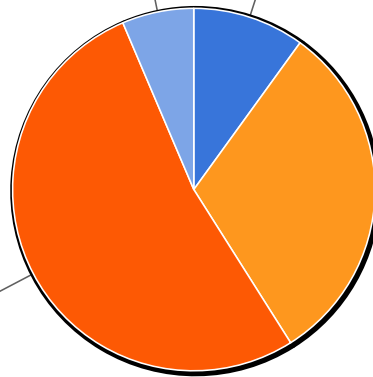
I am/we are willing to use waste depots and special collection events.

I/we would not attend a waste depot or special collection event 6.4%

Located anywhere in the County 10.0%

That are within a 10 minute drive from my home 52.6%

That are within a 20 minute drive from my home 31.1%



25. I am/we are willing to use waste depots and special collection events.

Value	Count	Percent %
Located anywhere in the County	70	10%
That are within a 20 minute drive from my home	218	31.1%
That are within a 10 minute drive from my home	369	52.6%
I/we would not attend a waste depot or special collection event	45	6.4%

Statistics

Total Responses 702

If it lowered the municipality's costs for garbage collection, I/we would be willing to have my garbage day changed.

We do not receive curbside garbage collection. 0.7%

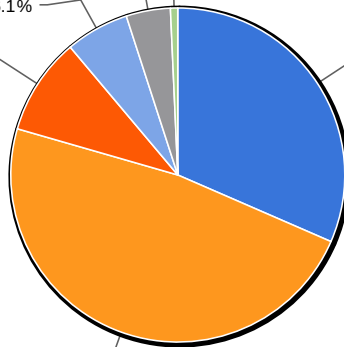
Strongly Disagree 4.3%

Disagree 6.1%

Don't know 9.4%

Strongly Agree 31.5%

Agree 47.9%



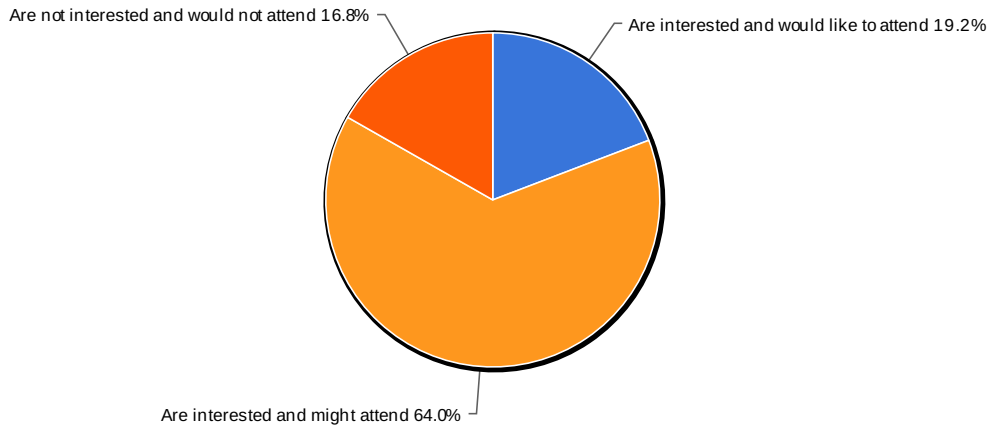
26. If it lowered the municipality's costs for garbage collection, I/we would be willing to have my garbage day changed.

Value	Count	Percent %
Strongly Agree	221	31.5%
Agree	336	47.9%
Don't know	66	9.4%
Disagree	43	6.1%
Strongly Disagree	30	4.3%
We do not receive curbside garbage collection.	5	0.7%

Statistics

Total Responses 701

If an open house event to discuss potential future options for waste management in Oxford County is held in the spring or early summer of this year, I/we:



**27. If an open house event to discuss potential future options for waste management in Oxford County is held in the spring or early summer of this year, I/we:**

Value	Count	Percent %
Are interested and would like to attend	134	19.2%
Are interested and might attend	447	64%
Are not interested and would not attend	117	16.8%

Statistics	
Total Responses	698

URL Variable: crc

Count	Response

URL Variable: id

Count	Response

**APPENDIX B - EKOS Research Associates Inc. Final Report, September  
2013**



# A Survey of Oxford County Resident Attitudes towards Waste, Recycling, and Water and Wastewater Services

**FINAL REPORT**

Submitted to:

County of Oxford – Public Works Department

**EKOS RESEARCH ASSOCIATES INC.**

September 2013

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# EXECUTIVE SUMMARY

## BACKGROUND AND METHODOLOGY

With public attention increasingly focused on infrastructure costs and governments increasingly concerned with budget planning and risk communication, the County of Oxford municipal government has asked EKOS Research Associates to survey residents' attitudes towards their various waste, recycling, water and wastewater services they receive, to contemplate possible changes in how these services are paid for, and to rank their preferred method of communicating with the County government.

More specifically this survey sought to develop a clear picture of public awareness of garbage and recycling guidelines, public attitudes around water and wastewater services, as well as surveying residents' preferred methods of receiving often vital communication about County services – whether through digital channels or by more traditional methods

The methodology for this study involved a regionally representative survey of 400 Oxford County residents 18 years of age and older that was conducted between August 19<sup>th</sup> and August 22<sup>nd</sup>. A sample of this size provides a margin of error of +/- 4.9 percentage points, 19 times out of 20. The margin of error increases when the results are sub-divided (i.e., error margins for sub-groups such as age or gender).

## SURVEY FINDINGS

Outlined below are key findings and conclusions from this study. The remainder of this report describes survey results in more detail.

Oxford County residents appear to be very aware of the basic elements of their garbage and recycling systems, use the County calendar and landfill services, and in general see the current system as the most equitable – although they are more reluctant to pay any more for the system than they already do. Study findings reveal that local residents are, in the main, satisfied with the quality and scope of the services they receive.

There are some interesting regional differences that ought to inform further County engagement or outreach programming - and notably the preferences of residents lean heavily towards the legacy media options in terms of how they would prefer to maintain contact with County government.

Residents understand the bag tag program (or the more general premise of pay-per-use services) as a fairer option but are less inclined to incur the costs of such a system any more than they do now. In the simple trade-off proposed by the survey (between additional costs for bag tags to better cover operating costs and the loss of weekly service to reduce costs) residents were much more likely to support the reduction of costs.

Similarly for their water and wastewater services – a majority describe the system as delivering good value for money and are overall satisfied with the quality of the water and wastewater services they receive (although there are notably lower levels of support in rural Oxford County and Ingersoll).

## INTRODUCTION

The County of Oxford municipal government commissioned EKOS Research Associates (EKOS) to survey County residents' attitudes towards the various waste, recycling, water and wastewater services they receive from the County government. The survey was divided into three sections: waste and recycling services; water and wastewater services; with a third section surveying residents' communication preferences.

The survey asked a random sample of Oxford County residents to reveal their general awareness of, and attitudes towards, these services. Respondents were asked to consider a variety of general policy orientations as well more focused trade-offs between costs and benefits.

## METHODOLOGY

This survey was conducted August 19<sup>th</sup> and August 22<sup>nd</sup> using EKOS' CATI telephone interview system. Respondents were randomly selected and in total, 400 Oxford County residents aged 18 and over responded to the telephone survey. A sample of this size provides a margin of error of +/- 4.9 percentage points, 19 times out of 20. The margin of error increases when the results are sub-divided (i.e., error margins for sub-groups such as age). Respondents were also surveyed by age, gender, household income and postal code (to allow a rough regional split).

## SECTION 1: SURVEYING RESIDENTS AWARENESS AND PREFERENCES – WASTE AND RECYCLING

### BAG TAG PROGRAMS

The first section of the survey asked respondents to describe their awareness of the basic elements of their waste and recycling programs – do they know about and use bag tags and do they follow recycling guidelines. In addition they were asked to consider how best to cover the operating costs for these services.

- There is very high awareness of bag tag programs (94 per cent are aware of the program) and a large majority is familiar with the basic requirement of actually using bag tags (75 per cent report they are already aware of usage guidelines, with much higher awareness among older respondents).
- In addition, more than 7 in 10 respondents think the bag tag model (i.e., pay for use) is a fairer system (and notably only eight per cent are neutral or didn't respond on the point).
- But when asked to pay for that fairness – through higher single tag fees - the same number respond negatively to increasing the costs of the pay for use system (68 per cent - with a similarly low number uncertain about their preference).
- When asked in specific terms, what cost increase would be appropriate, 6 of 10 respondents said there should be **no increase** in the bag tag price, while 30 per cent thought a **50-cent increase** was ideal. So while the general population is largely unwilling to pay more for what they deem a more equitable system, it is our experience that this is not a unique or surprising response. Also of note is that there is higher support for accepting additional costs among younger residents. (The rate of support among under 35s is in some cases two or three times higher than their older neighbors.) This too is very much in keeping with ongoing survey work conducted by EKOS on 'green' issues: younger Canadians consistently support additional costs as means of inducing policy changes particularly where understood as an environmental issue.

## BAG TAG PROGRAMS

- An equally high degree of awareness was found for County recycling programs – 91 per cent report having a basic or strong knowledge of the recycling guidelines. And an almost even split emerges between those who do and those who do not think knowing more would not change their daily recycling behavior. (Presumably this split is a function of the fact that so many residents already know what they are and are not meant to do in terms of bringing recycling curbside.)
- Nor should the general awareness of garbage and recycling come as a surprise; 86 per cent of respondents report having used their garbage and recycling information calendar at some point in the last year.
- Additionally a significant plurality know of, or have used, the Oxford County Landfill in Salford (68 per cent are aware of the services available at the site and just over 6 in 10 have used the site at some point).
- Given a general reluctance to increase the price of services, the option to cut costs through reductions in garbage collection service levels reveals high levels of support; just less than 7 in 10 respondents would support a reduction in garbage collection in winter to a bi-weekly schedule. Notable differences in support emerge between income levels (higher income levels prefer not to lose service – which is unsurprising) and regionally (with much less support for the move in Woodstock than in any other area of the County).

## SECTION 2: WATER AND WASTEWATER SERVICES

The second portion of the survey asked respondents to rank their water and wastewater services in terms of reliability and safety. In addition, respondents were asked to indicate their understanding of the charges that appear on their monthly bills.

- Only a third of respondents thought they were getting good value for money, with 4 in 10 suggesting they receive adequate value. Taken together this still represents over 70 per cent general satisfaction (and with 8 per cent who could not say, the number of people that feel their service is poor value for money is about 1 in 5). Significantly, there are clear differences when considered regionally; respondents in rural Oxford County and in Ingersoll were significantly more likely to suggest they are not getting good value for money (notably residents of Ingersoll are twice as likely as those in Woodstock to report poor value for money), and rural residents more than two and a half times more likely to report poor value for money).
- A large number feel their water is safe (81 per cent) and 94 per cent rate the overall reliability of their water services as 'usually' or 'very' reliable. And again the starkest differences, when considered by region, suggest that in rural Oxford County and in Ingersoll, respondents were significantly more likely to report finding their water unsafe or to report a lower degree of overall satisfaction. (29 per cent of respondents in Ingersoll do not feel their water is safe compared with the overall average of 16 per cent - and only 7% of respondents in Tillsonburg who think so – while Ingersoll respondents were 20 points lower in their appraisal of water services as very reliable overall.)
- On the question of the ease of use of monthly bills, most notable here is the degree to which respondents report feeling confused by the various charges on these bills. There is a large majority that feels they are minimally or completely confident they understand their bill (nearly two thirds of respondents indicate they are confident or at least minimally confident they understood the charges). But on this question, a full quarter of all respondents reported finding their water charges confusing. This result is particularly notable given that CATI surveys can suffer from social desirability mode effects (in that respondents are less inclined to report, for example, that they don't understand basic service charges). So the response is certainly worth taking note of – in spite of a propensity to under-report difficulty in comprehension to a live interviewer, there are still 25 per cent of respondents who find their charges confusing, and with no specific differences across demographic groups.

## SECTION 3: PREFERRED MODES OF COMMUNICATION

Respondents were asked to rate their preferences for a variety of communication methods, by their likeliness to use them in future. In addition, respondents were invited to provide other suggested means for maintaining contact with Oxford County.

- As far as preferred communication strategies are concerned, there is a very clear skew in the broader Oxford County community towards legacy media; among respondents the most preferred options for ongoing communication with Oxford County were print materials and reporting or advertising on local television and radio stations. There is very little support for outreach through social media or special events programming and there is mixed support for accessing general information or signing up for e-alerts (with even less interest in downloading County reports).
- There are expected differences across age – younger respondents were far more likely to prefer using digital access points than older respondents (75 per cent of under 35s indicated they were somewhat likely or very likely to connect through social media versus only 10 per cent for those 65 years of age and over). And the opposite holds true here as well (almost twice as many respondents over 65 years of age preferred print materials than respondents under 35).
- There are few significant differences between genders; women were overall more likely to prefer digital communications, exhibiting a much stronger preference for social media than men (20 per cent of women were very likely versus only 6% of men), while men were more likely to report across the modes of communications to be very unlikely to try any mode of communication.
- Indeed the greatest comparative utility is derived in contrasting those preferences considered ‘very likely’ to be used. By this measure respondents are most likely to prefer – by a large margin – to receive communication in printed format (44 per cent were very likely to use this means of communication), with local media coverage (and advertising in those media) the next closest options (at 35 per cent and 31 per cent respectively).
- The least preferred options were public meetings (only nine per cent indicated they were very likely), social media (13 per cent) and using the County website for specific reports (14 per cent).
- Among the additional suggestions for communication options, respondents were likely to simply replicate the nine measures suggested in the survey with different language. There were 14 ‘other’ responses (weighted to 20) out of 405 total and they included specific suggestions for print media (e.g., additional communication on tax notices or utility bills, or through the recycling calendar) or were simply restated versions of the initial options presented (respondents suggested communicating through email, websites, radio and television stations, etc.). All options were grouped together and are listed in the attached tables.

# APPENDIX A

## QUESTIONNAIRE

**PINTRO**

**PHONE INTRO**

Hello, my name is ... and I'm calling from EKOS Research Associates. We are calling Oxford County residents to conduct a survey about garbage, recycling and water and wastewater services in your area.

Please rest assured that your answers are completely confidential.

(If not in Oxford County, thank and terminate)

TOTAL..... 0 100%

**PRIV**

This call may be recorded for quality control or training purposes.

TOTAL..... 0 100%

**Q1**

I would like to begin our survey by asking a series of basic questions relating to curbside collection for garbage and recycling in your area.

First, are you aware Oxford County has a bag tag program for garbage collection?

Yes..... 1  
No..... 2  
TOTAL.....

**Q2**

Bag tags are a pay-for-use system, which means you pay for what you put out in the trash rather than sharing the costs more evenly through municipal taxes. In your opinion, is this a fairer system?

Yes..... 1  
No..... 2  
Neither more or less fair..... 3  
Don't know ..... 9  
TOTAL.....



**Q3**

Right now, bag tag fees only cover part of the costs of managing waste. If you feel bag tags-- or pay-per-use-- is a fairer system, would you support raising the costs of bag tags to cover more or all of the full cost of curbside collection?

Yes.....	1
No.....	2
Don't know .....	9
TOTAL.....	

**Q4**

Given the current bag tag price is \$1.50, how much more would you be willing to pay for bag tags to cover more of the costs?

No increase.....	1
50 cents more.....	2
\$1 more.....	3
\$2 more.....	4
Don't know .....	9
TOTAL.....	

**Q5**

Oxford County asks you to leave your garbage bags tied - with bag tags - in a specific way to ensure safe and efficient pick-up. Have you received any information or are you already aware of bag tag usage guidelines?

Yes.....	1
No.....	2
TOTAL.....	

**Q6**

There are also basic guidelines in place for Oxford County's recycling program. If you had to, how would you rate your general knowledge of the recycling guidelines?

Very strong .....	1
Basic knowledge.....	2
Largely unaware .....	3
Not sure at all .....	4
Cannot comment.....	9
TOTAL.....	

**Q7**

If you knew more about how the recycling system works, and the costs associated with recycling operations, would it help you in your daily recycling behaviour?

Yes.....	1
No.....	2
Don't know .....	9
TOTAL.....	

**Q8**

Oxford County and the City of Woodstock each publish an annual waste and recycling calendar with pick-up schedules, guidelines for sorting recyclables, and special collection dates (for services such as large item pick-up). Have you used the calendar in the last year to check collection dates or to find information?

Yes.....	1
No.....	2
Don't recall .....	9
TOTAL.....	

**PQ9**

Public Works offers year-round disposal and recycling services at the Oxford County Landfill at Salford.

TOTAL.....	
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**Q9A**

Are you aware of the different types of waste and recycling drop-offs available at the site?

Yes.....	1
No.....	2
Don't know or can't recall .....	9
TOTAL.....	

**Q9B**

Have you used the Oxford County landfill site in Salford before?

Yes.....	1
No.....	2
Don't know or can't recall .....	9
TOTAL.....	

**Q10**

Oxford County is considering moving to bi-weekly garbage collection for the winter months - this is currently how recycling is collected all year long. Would you support such a change in service if it reduces costs?

Yes.....	1
No.....	2
Don't know .....	9
TOTAL.....	

**Q11**

And now we would like to ask about Oxford County water and wastewater services

Do you have either municipal water or municipal wastewater services - or both - at your residence or do you have private services, i.e., a well and septic system?

Municipal .....	
Private.....	2->PQ18
Don't know .....	9->PQ18
TOTAL.....	

**Q12**

Thinking about the water and wastewater services you currently receive, would you say you get good value for money?

Good value .....	1
Adequate value .....	2
Poor value for money .....	3
I can't say.....	9
TOTAL.....	

**Q13**

Do you feel your drinking water is safe?

Yes.....	1
No.....	2
Don't know / cannot answer .....	9
TOTAL.....	

**Q14**

How would you rate the overall reliability of the water and wastewater services you receive?

Very reliable.....	1
Usually reliable.....	2
Often unreliable.....	3
Not sure .....	9
TOTAL.....	

**Q15**

Water and sewer charges on your hydro bill cover a number of costs related to operating the County's water and sewer services. These include operations and testing, maintenance, billing administration, etc. Are you confident that you understand what you are paying for through your water and sewer charges?

Yes.....	1
I understand the basics.....	2
I find water charges confusing.....	3
Don't know / not sure.....	9
TOTAL.....	

**Q16**

The County plans on installing water meters in all systems by 2016. Do you know if you are currently on a flat rate water system or a metered system?

Metered system.....	1
Flat rate system.....	2
Don't know .....	9
TOTAL.....	

**PQ18**

Having asked you about garbage and water and wastewater services, we'd like to finish off the survey by asking you how best Oxford County can communicate with you in future

Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future. Having asked you about garbage and water and wastewater services, we'd like to finish off the survey by asking you how best Oxford County can communicate with you in future.

Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.

For each option please indicate whether you are very likely, somewhat likely, not very likely or not at all likely to use or respond to each of the following

TOTAL.....

**Q18A**

Visiting the Oxford County website for general information  
Very likely..... 1  
Somewhat likely ..... 2  
Nov very likely ..... 3  
Not at all likely ..... 4  
Don't know ..... 9  
TOTAL.....

**Q18B**

Signing up for email alerts to receive news automatically from the Oxford County website  
Very likely..... 1  
Somewhat likely ..... 2  
Nov very likely ..... 3  
Not at all likely ..... 4  
Don't know ..... 9  
TOTAL.....

**Q18C**

Visiting the Oxford County website to access specific publications such as annual water and wastewater reports  
Very likely..... 1  
Somewhat likely ..... 2  
Nov very likely ..... 3  
Not at all likely ..... 4  
Don't know ..... 9  
TOTAL.....

**Q18D**

Advertising in local newspapers or on local radio stations  
Very likely..... 1  
Somewhat likely ..... 2  
Nov very likely ..... 3  
Not at all likely ..... 4  
Don't know ..... 9  
TOTAL.....

**Q18E**

Taking note of news coverage in your local newspaper or on radio

Very likely.....	1
Somewhat likely.....	2
Nov very likely.....	3
Not at all likely.....	4
Don't know.....	9
TOTAL.....	

**Q18F**

Reading print materials such as flyers, posters or pamphlets	
Very likely.....	1
Somewhat likely.....	2
Nov very likely.....	3
Not at all likely.....	4
Don't know.....	9
TOTAL.....	

**Q18G**

Participating in special events, such as public information meetings or telephone town halls	
Very likely.....	1
Somewhat likely.....	2
Nov very likely.....	3
Not at all likely.....	4
Don't know.....	9
TOTAL.....	

**Q18H**

Using social media, like Facebook and Twitter	
Very likely.....	1
Somewhat likely.....	2
Nov very likely.....	3
Not at all likely.....	4
Don't know.....	9
TOTAL.....	

**Q18I**

Taking notice of billboards	
Very likely.....	1
Somewhat likely.....	2
Nov very likely.....	3
Not at all likely.....	4
Don't know.....	9
TOTAL.....	

**Q18J**

*Optional*

Are there other options you would prefer?

Very likely .....	1
Somewhat likely .....	2
Nov very likely .....	3
Not at all likely .....	4
Don't know .....	9
TOTAL.....	

**QAGE**

In what year were you born?

Year : .....	77
No response .....	9999
TOTAL.....	

**D1A**

***NO RESPONSE***

May we place your age into one of the following general age categories?

Under 25 .....	1
25-34 years .....	2
35-44 years .....	3
45-54 years .....	4
55-64 years .....	5
65-74 years .....	6
75 years or older .....	7
No response .....	9
TOTAL.....	

**QSEX**

Record gender (do not ask)

Male.....	1
Female .....	2
TOTAL.....	

**QPOSTC**

What is your postal code?

All Oxford County postal codes begin with "N" .....	1
Don't know .....	99
TOTAL.....	



**QINC**

What is your annual HOUSEHOLD income from all sources before taxes?

<\$10,000.....	1
\$10,000-\$19,999.....	2
\$20,000-\$29,999.....	3
\$30,000-\$39,999.....	4
\$40,000-\$49,999.....	5
\$50,000-\$59,999.....	6
\$60,000-\$79,999.....	7
\$80,000-\$99,999.....	8
\$100,000-\$119,999.....	9
\$120,000 or more .....	10
Don't know / No response.....	99
TOTAL.....	

**QEND**

1.....	1
TOTAL.....	

**THNK**

Thank you very much for taking the time to complete this survey.

TOTAL.....	
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<b>Oxford County Age Proportions</b>	
	<b>Total</b>
WAGE	
Weighted Total:	399
Total:	399
<25	11%
<b>25-34</b>	15%
<b>35-44</b>	16%
<b>45-54</b>	20%
<b>55-64</b>	17%
<b>65+</b>	21%
Margin of Error, around 50%	4.91

Weighting proportions

<b>Oxford County Gender Proportions (18+)</b>	
	<b>Total</b>
WSEX	
Weighted Total:	405
Total:	405
<b>Male</b>	<b>48%</b>
<b>Female</b>	<b>52%</b>
Margin of Error, around 50%	4.87

Weighting proportions

First, are you aware Oxford County has a bag tag program for garbage collection?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q1															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Yes</b>	<b>94%</b>	<b>88%</b>	<b>99%</b>	94%	95%	95%	93%	95%	<b>97%</b>	<b>87%</b>	96%	94%	95%	<b>100%</b>	98%
		--	++						++	---				++	+
<b>No</b>	6%	<b>12%</b>	<b>1%</b>	6%	5%	5%	7%	5%	<b>3%</b>	<b>13%</b>	4%	6%	5%	<b>0%</b>	2%
		++	--						--	+++				--	-
Chi2:	-	(90)					-		(99)				-		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Bag tags are a pay-for-use system, which means you pay for what you put out in the trash rather than sharing the costs more evenly through municipal taxes. In your opinion, is this a fairer system?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Woodstock	Tillsonburg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q2															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Yes</b>	72%	77%	69%	79% +	65%	68%	75%	69%	72%	72%	75%	71%	67%	78%	<b>81%</b> ++
<b>No</b>	20%	18%	21%	14%	27%	23%	17%	23%	20%	24%	11%	22%	21%	17%	15%
<b>Neither more or less fair</b>	4%	1%	6%	5%	4%	4%	4%	3%	4%	1%	8% -	4%	1%	2%	4%
<b>Don't know</b>	4%	3%	4%	2%	5%	5%	4%	5%	4%	4%	6% +	4%	11%	3%	0%
Chi2:	-	-					-		-				-		
Margin of Error, around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Right now, bag tag fees only cover part of the costs of managing waste. If you feel bag tags-- or pay-per-use-- is a fairer system, would you support raising the costs of bag tags to cover more or all of the full cost of curbside collection?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Woodstock	Tillsonburg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q3															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Yes</b>	22%	17%	24%	23%	15%	29%	24%	19%	18%	24%	17%	27%	22%	17%	22%
<b>No</b>	68%	70%	70%	70%	69%	62%	68%	69%	65%	71%	72%	68%	73%	73%	63%
<b>Don't know</b>	10%	13%	6%	7%	16%	9%	8%	12%	16%	5%	11%	5%	5%	10%	14%
Chi2:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Given the current bag tag price is \$1.50, how much more would you be willing to pay for bag tags to cover more of the costs?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q4															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>No increase</b>	59%	47%	66%	61%	67%	58%	60%	59%	57%	63%	61%	61%	67%	58%	59%
<b>50 cents more</b>	30%	<b>41%</b> ++	23%	28%	23%	30%	28%	31%	33%	<b>19%</b> --	32%	31%	24%	34%	33%
<b>\$1 more</b>	4%	9% +	5%	3%	2%	1%	2%	6% +	3%	<b>10%</b> +++	3%	2%	1%	4%	4%
<b>\$2 more</b>	2%	0%	<b>5%</b> ++	3%	1%	1%	2%	2%	1%	3%	1%	2%	0%	1%	2%
<b>Don't know</b>	5%	3%	1%	5%	6%	9%	8%	2%	6%	4%	3%	5%	8%	4%	1%
Chi2:	-	(95)					-		(95)				-		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Oxford County asks you to leave your garbage bags tied - with bag tags - in a specific way to ensure safe and efficient pick-up. Have you received any information or are you already aware of bag tag usage guidelines?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Woodstock	Tillsonburg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q5															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Yes</b>	75%	71%	70%	73%	74%	<b>86%</b> +++	73%	77%	<b>70%</b> --	79%	82%	77%	73%	72%	74%
<b>No</b>	25%	29%	30%	27%	26%	<b>14%</b> ---	27%	23%	<b>30%</b> ++	21%	18%	23%	27%	28%	26%
Chi2:	-	-					-		-				-		
Margin of Error, around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51



There are also basic guidelines in place for Oxford County's recycling program. If you had to, how would you rate your general knowledge of the recycling guidelines?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Woodstock	Tillsonburg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q6															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Very strong</b>	41%	<b>20%</b> ----	48%	<b>57%</b> +++	46%	46%	42%	41%	42%	38%	50%	39%	43%	46%	42%
<b>Basic knowledge</b>	50%	<b>70%</b> +++	41%	42%	47%	<b>41%</b> --	48%	51%	48%	54%	45%	52%	43%	<b>38%</b> --	52%
<b>Largely unaware</b>	5%	9%	7%	2%	3%	6%	5%	6%	8%	3%	3%	5%	5%	<b>16%</b> ++++	2%
<b>Not sure at all</b>	3%	1%	4%	0%	4%	5%	4%	2%	2%	4%	3%	3%	<b>9%</b> ++++	0%	4%
<b>Cannot comment</b>	0%	0%	0%	0%	0%	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%
Chi2:	-	(99.9)					-		-				(99)		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

If you knew more about how the recycling system works, and the costs associated with recycling operations, would it help you in your daily recycling behaviour?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Woodstock	Tillsonburg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q7															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Yes</b>	46%	<b>66%</b> +++	52%	41%	<b>31%</b> ---	<b>33%</b> ---	43%	49%	<b>39%</b> --	<b>56%</b> ++	48%	49%	37%	55%	54%
<b>No</b>	50%	<b>32%</b> ---	43%	58%	<b>64%</b> +++	<b>59%</b> ++	53%	47%	<b>59%</b> +++	44%	50%	<b>41%</b> --	56%	<b>39%</b> --	46%
<b>Don't know</b>	4%	1%	5%	1%	5%	8%	4%	4%	2%	0%	3%	11%	7%	6%	0%
Chi2:	-	99.9					-		95				90		
Margin of Error, around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Have you used the annual waste and recycling calendar in the last year to check collection dates or to find information?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q8															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Yes</b>	<b>86%</b>	<b>88%</b>	<b>85%</b>	<b>88%</b>	<b>90%</b>	<b>79%</b>	<b>83%</b>	<b>89%</b>	<b>89%</b>	<b>78%</b>	<b>92%</b>	<b>85%</b>	<b>66%</b>	<b>88%</b>	<b>89%</b>
						--	-	+		--			----		
<b>No</b>	<b>13%</b>	<b>9%</b>	<b>14%</b>	<b>12%</b>	<b>10%</b>	<b>21%</b>	<b>16%</b>	<b>11%</b>	<b>11%</b>	<b>22%</b>	<b>8%</b>	<b>12%</b>	<b>29%</b>	<b>11%</b>	<b>11%</b>
						+++				++			++++		
<b>Don't recall</b>	<b>1%</b>	<b>3%</b>	<b>1%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>2%</b>	<b>0%</b>	<b>0%</b>	<b>1%</b>	<b>0%</b>	<b>3%</b>	<b>5%</b>	<b>1%</b>	<b>0%</b>
Chi2:	-	-					-		90				99		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Are you aware of the different types of waste and recycling drop-offs available at the site?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q9A															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Yes</b>	68%	73%	64%	76%	65%	62%	73%	63%	<b>62%</b>	69%	74%	73%	60%	<b>56%</b>	<b>78%</b>
<b>No</b>	27%	<b>15%</b>	31%	21%	34%	<b>37%</b>	24%	30%	31%	29%	22%	22%	32%	<b>43%</b>	20%
<b>Don't know or can't recall</b>	5%	12%	4%	3%	2%	1%	3%	7%	7%	2%	4%	5%	8%	1%	2%
Chi2:	-	95					90		-				99		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Have you used the Oxford County landfill site in Salford before?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q9B															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Yes</b>	61%	59%	64%	<b>74%</b> +++	66%	<b>45%</b> ----	64%	57%	58%	51%	<b>78%</b> - +++	64%	<b>40%</b> ----	62%	<b>70%</b> ++
<b>No</b>	39%	41%	36%	<b>26%</b> ---	33%	<b>55%</b> ++++	36%	42%	42%	49%	<b>22%</b> + ---	35%	<b>60%</b> ++++	38%	<b>30%</b> --
<b>Don't know or can't recall</b>	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
Chi2:	-	99					-		95				99.9		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Oxford County is considering moving to bi-weekly garbage collection for the winter months - this is currently how recycling is collected all year long. Would you support such a change in service if it reduces costs?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Woodstock	Tillsonburg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q10															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Yes</b>	68%	70%	64%	59%	70%	74%	68%	67%	<b>60%</b>	<b>78%</b>	65%	71%	74%	<b>82%</b>	<b>56%</b>
				-					---	++				+++	---
<b>No</b>	29%	30%	35%	<b>38%</b>	25%	<b>19%</b>	27%	31%	<b>38%</b>	<b>19%</b>	31%	24%	20%	<b>16%</b>	<b>43%</b>
				++		---			+++	--			-	---	++++
<b>Don't know</b>	3%	0%	1%	3%	5%	7%	5%	2%	2%	2%	4%	5%	6%	2%	1%
Chi2:	-	90					-		99				99.9		
Margin of Error, around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Do you have either municipal water or municipal wastewater services - or both - at your residence or do you have private services, i.e., a well and septic system?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Woodstock	Tillsonburg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q11															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Municipal</b>	72%	62%	73%	76%	77%	74%	<b>79%</b> +++	<b>65%</b> ---	<b>82%</b> ++++	77%	77%	<b>49%</b> ----	78%	66%	77%
<b>Private</b>	22%	20%	24%	21%	21%	24%	21%	23%	<b>11%</b> ----	<b>12%</b> --	20%	<b>49%</b> ++++	17%	23%	23%
<b>Don't know</b>	6%	18%	3%	3%	2%	3%	1%	12%	8%	11%	3%	2%	5%	11%	0%
Chi2:	-	-	-	-	-	-	90		99.9				-		
Margin of Error, around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Thinking about the water and wastewater services you currently receive, would you say you get good value for money?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q12															
Weighted Total:	290	63	47	62	51	63	153	137	133	70	34	52	51	51	74
Total:	298	27	52	56	77	81	106	192	136	67	43	51	60	52	60
<b>Good value</b>	33%	34%	31%	25%	29%	42%	30%	35%	36%	32%	25%	28%	38%	37%	<b>18%</b>
															---
<b>Adequate value</b>	40%	49%	<b>54%</b>	45%	35%	<b>22%</b>	37%	43%	42%	42%	41%	34%	33%	41%	<b>57%</b>
			++			----									+++
<b>Poor value for money</b>	19%	13%	13%	17%	25%	25%	<b>25%</b>	<b>13%</b>	<b>13%</b>	17%	26%	<b>34%</b>	22%	14%	22%
							+++	---	--			+++			
<b>I can't say</b>	8%	4%	1%	12%	11%	11%	7%	9%	9%	9%	8%	4%	7%	8%	4%
Chi2:	-	95					95		90				95		
Margin of Error, around 50%	5.68	18.86	13.59	13.10	11.17	10.89	9.52	7.07	8.40	11.97	14.94	13.72	12.65	13.59	12.65



Do you feel your drinking water is safe?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q13															
Weighted Total:	290	63	47	62	51	63	153	137	133	70	34	52	51	51	74
Total:	298	27	52	56	77	81	106	192	136	67	43	51	60	52	60
<b>Yes</b>	<b>81%</b>	<b>77%</b>	<b>84%</b>	<b>81%</b>	<b>82%</b>	<b>87%</b>	<b>85%</b>	<b>77%</b>	<b>81%</b>	<b>88%</b>	<b>71%</b>	<b>80%</b>	<b>72%</b>	<b>90%</b>	<b>82%</b>
							+	-			-		--	+	
<b>No</b>	<b>16%</b>	<b>23%</b>	<b>13%</b>	<b>19%</b>	<b>14%</b>	<b>7%</b>	<b>12%</b>	<b>21%</b>	<b>17%</b>	<b>7%</b>	<b>29%</b>	<b>17%</b>	<b>25%</b>	<b>10%</b>	<b>18%</b>
						--	--	++		--	++		++		
<b>Don't know / cannot answer</b>	<b>3%</b>	<b>0%</b>	<b>3%</b>	<b>0%</b>	<b>4%</b>	<b>6%</b>	<b>3%</b>	<b>3%</b>	<b>2%</b>	<b>6%</b>	<b>0%</b>	<b>3%</b>	<b>3%</b>	<b>0%</b>	<b>1%</b>
Chi2:	-	-					95		95				-		
Margin of Error,around 50%	5.68	18.86	13.59	13.10	11.17	10.89	9.52	7.07	8.40	11.97	14.94	13.72	12.65	13.59	12.65

How would you rate the overall reliability of the water and wastewater services you receive?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q14															
Weighted Total:	290	63	47	62	51	63	153	137	133	70	34	52	51	51	74
Total:	298	27	52	56	77	81	106	192	136	67	43	51	60	52	60
<b>Very reliable</b>	72%	71%	83%	78%	64%	69%	74%	70%	73%	77%	55%	74%	66%	78%	73%
<b>Usually reliable</b>	22%	24%	12%	22%	28%	23%	22%	23%	23%	21%	33%	16%	27%	13%	24%
<b>Often unreliable</b>	3%	2%	1%	0%	4%	3%	2%	3%	2%	2%	4%	4%	2%	5%	1%
<b>Not sure</b>	3%	2%	4%	0%	4%	5%	2%	4%	2%	0%	8%	5%	4%	5%	1%
Chi2:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Margin of Error, around 50%	5.68	18.86	13.59	13.10	11.17	10.89	9.52	7.07	8.40	11.97	14.94	13.72	12.65	13.59	12.65

Are you confident that you understand what you are paying for through your water and sewer charges?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Woodstock	Tillsonburg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q15															
Weighted Total:	290	63	47	62	51	63	153	137	133	70	34	52	51	51	74
Total:	298	27	52	56	77	81	106	192	136	67	43	51	60	52	60
<b>Yes</b>	<b>36%</b>	<b>23%</b>	<b>34%</b>	<b>39%</b>	<b>36%</b>	<b>47%</b>	<b>39%</b>	<b>33%</b>	<b>27%</b>	<b>54%</b>	<b>41%</b>	<b>36%</b>	<b>38%</b>	<b>36%</b>	<b>27%</b>
<b>I understand the basics</b>	28%	50%	27%	<b>15%</b>	32%	20%	27%	29%	32%	21%	19%	33%	27%	31%	30%
<b>I find water charges confusing</b>	26%	22%	24%	35%	24%	22%	25%	27%	30%	20%	28%	21%	21%	24%	<b>37%</b>
<b>Don't know / not sure</b>	10%	4%	15%	10%	9%	11%	9%	11%	11%	5%	12%	10%	15%	9%	7%
Chi2:	-	99					-		95				-		
Margin of Error, around 50%	5.68	18.86	13.59	13.10	11.17	10.89	9.52	7.07	8.40	11.97	14.94	13.72	12.65	13.59	12.65

The County plans on installing water meters in all systems by 2016. Do you know if you are currently on a flat rate water system or a metered system?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q16															
Weighted Total:	290	63	47	62	51	63	153	137	133	70	34	52	51	51	74
Total:	298	27	52	56	77	81	106	192	136	67	43	51	60	52	60
<b>Metered system</b>	70%	49%	66%	<b>81%</b>	75%	78%	75%	65%	<b>79%</b>	79%	<b>93%</b>	<b>21%</b>	65%	74%	67%
				++		+	+	-	+++	+	++++	----			
<b>Flat rate system</b>	18%	22%	22%	11%	22%	15%	21%	15%	<b>5%</b>	<b>9%</b>	7%	<b>70%</b>	22%	14%	22%
									----	--	-	++++			
<b>Don't know</b>	12%	29%	12%	8%	3%	7%	5%	20%	15%	12%	0%	9%	14%	12%	11%
Chi2:	-	90					-		99.9				-		
Margin of Error,around 50%	5.68	18.86	13.59	13.10	11.17	10.89	9.52	7.07	8.40	11.97	14.94	13.72	12.65	13.59	12.65

Visiting the Oxford County website for general information															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18A Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>LIKELY (1-2)</b>	52%	52%	<b>76%</b> ++++	61% +	49%	<b>29%</b> ----	54%	50%	56%	57%	42%	43%	<b>40%</b> --	58%	<b>67%</b> ++++
<b>NOT LIKELY (3-4)</b>	48%	48%	<b>24%</b> ----	39% -	51%	<b>71%</b> ++++	46%	49%	43%	43%	58%	56%	<b>60%</b> ++	42%	<b>33%</b> --
<b>Very likely</b>	23%	20%	<b>40%</b> ++++	23%	21%	19%	23%	24%	<b>29%</b> ++	25%	21%	<b>14%</b> --	19%	20%	25%
<b>Somewhat likely</b>	28%	32%	36%	<b>38%</b> ++	28%	<b>10%</b> ----	30%	26%	28%	32%	21%	29%	21%	<b>38%</b> ++	<b>41%</b> +++
<b>Nov very likely</b>	25%	<b>36%</b> ++	<b>12%</b> ---	24%	28%	23%	22%	29%	23%	28%	29%	26%	20%	33%	<b>17%</b> --
<b>Not at all likely</b>	23%	12% -	<b>12%</b> --	15% -	23%	<b>48%</b> ++++	24%	21%	20%	15%	29%	<b>30%</b> ++	<b>40%</b> ++++	<b>9%</b> ---	16%
<b>Don't know</b>	0%	0%	0%	0%	1%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%
Chi2:	-	99.9					-		-				99.9		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Signing up for email alerts to receive news automatically from the Oxford County website															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18B Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>LIKELY (1-2)</b>	39%	45%	<b>51%</b> ++	31%	45%	<b>24%</b> ----	<b>32%</b> --	<b>45%</b> ++	43%	29%	42%	40%	34%	<b>50%</b> ++	37%
<b>NOT LIKELY (3-4)</b>	60%	55%	<b>49%</b> --	69%	52%	<b>73%</b> +++	<b>66%</b> ++	<b>54%</b> --	56%	69%	58%	59%	64%	<b>50%</b> --	62%
<b>Very likely</b>	19%	14%	<b>29%</b> ++	20%	19%	16%	17%	20%	19%	19%	24%	16%	19%	19%	22%
<b>Somewhat likely</b>	20%	<b>31%</b> ++	23%	<b>11%</b> --	27%	<b>8%</b> ----	<b>15%</b> --	<b>25%</b> ++	23%	<b>10%</b> --	18%	24%	16%	<b>31%</b> +++	15%
<b>Nov very likely</b>	25%	26%	25%	<b>35%</b> ++	18%	20%	25%	24%	<b>20%</b> --	<b>33%</b> ++	23%	25%	<b>15%</b> --	24%	27%
<b>Not at all likely</b>	35%	29%	<b>24%</b> --	34%	34%	<b>53%</b> ++++	<b>41%</b> ++	<b>30%</b> --	36%	36%	35%	34%	<b>49%</b> +++	26%	35%
<b>Don't know</b>	1%	0%	0%	0%	2%	3%	2%	1%	2%	1%	0%	2%	2%	0%	1%
Chi2:	-	99.9					99		-				95		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Visiting the Oxford County website to access specific publications such as annual water and wastewater reports															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18C Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>LIKELY (1-2)</b>	29%	26%	<b>46%</b> +++	34%	24%	<b>21%</b> --	32%	27%	<b>35%</b> ++	26%	31%	<b>21%</b> --	34%	29%	27%
<b>NOT LIKELY (3-4)</b>	70%	74%	<b>54%</b> ---	66%	75%	<b>77%</b> +	68%	71%	<b>64%</b> --	73%	67%	<b>79%</b> ++	66%	71%	72%
<b>Very likely</b>	14%	18%	21% +	15%	11%	<b>5%</b> ---	15%	13%	<b>19%</b> +++	11%	13%	<b>7%</b> --	12%	14%	13%
<b>Somewhat likely</b>	16%	9%	<b>25%</b> ++	18%	14%	16%	17%	14%	16%	16%	18%	14%	22%	15%	14%
<b>Nov very likely</b>	28%	32%	25%	31%	29%	23%	28%	27%	<b>22%</b> --	<b>41%</b> +++	35%	23%	<b>19%</b> --	34%	30%
<b>Not at all likely</b>	42%	41%	<b>29%</b> --	36%	46%	<b>54%</b> +++	40%	44%	42%	<b>32%</b> --	32%	<b>56%</b> +++	48%	37%	42%
<b>Don't know</b>	1%	0%	0%	0%	1%	2%	0%	2%	1%	1%	2%	0%	0%	0%	0%
Chi2:	-	95					-		99				-		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Advertising in local newspapers or on local radio stations															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18D Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>LIKELY (1-2)</b>	71%	<b>87%</b> +++	68%	65%	<b>58%</b> ---	71%	71%	70%	<b>80%</b> ++	69%	65%	76%	68%	68%	
<b>NOT LIKELY (3-4)</b>	28%	<b>13%</b> --	32%	35%	<b>41%</b> +++	26%	28%	28%	20%	30%	34%	22%	32%	32%	
<b>Very likely</b>	31%	26%	40% +	23% -	26%	<b>43%</b> +++	34%	28%	31%	33%	34%	28%	<b>43%</b> +++	29%	39% +
<b>Somewhat likely</b>	40%	<b>61%</b> ++++	<b>28%</b> --	42%	32%	<b>27%</b> ---	37%	42%	39%	47%	35%	37%	32%	39%	<b>30%</b> --
<b>Nov very likely</b>	14%	5% -	21%	16%	21%	15%	16%	13%	13%	11%	<b>26%</b> ++	13%	11%	18%	17%
<b>Not at all likely</b>	14%	8%	11%	20% +	20% +	11%	12%	15%	15%	9%	<b>3%</b> --	<b>20%</b> ++	11%	15%	15%
<b>Don't know</b>	1%	0%	0%	0% +	1% +	4%	1%	2%	2%	0%	1%	1%	2%	0%	0%
Chi2:	-	99.9					-		-				-		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51



Taking note of news coverage in your local newspaper or on radio															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18E Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>LIKELY (1-2)</b>	75%	<b>88%</b> ++	76%	69%	<b>64%</b> --	72%	72%	77%	75%	<b>85%</b> ++	73%	68%	79%	<b>66%</b> --	76%
<b>NOT LIKELY (3-4)</b>	25%	<b>12%</b> --	24%	31%	<b>35%</b> ++	27%	28%	22%	25%	<b>15%</b> --	26%	32%	20%	<b>34%</b> ++	23%
<b>Very likely</b>	35%	29%	<b>50%</b> +++	<b>24%</b> --	35%	<b>45%</b> ++	37%	34%	35%	41%	30%	33%	<b>49%</b> +++	28%	<b>44%</b> ++
<b>Somewhat likely</b>	39%	<b>59%</b> +++	<b>27%</b> --	45%	<b>29%</b> --	<b>27%</b> ---	35%	43%	40%	43%	43%	35%	30%	38%	32%
<b>Nov very likely</b>	12%	4%	18%	13%	14%	14%	<b>16%</b> ++	<b>8%</b> --	10%	8%	14%	15%	10%	<b>20%</b> ++	11%
<b>Not at all likely</b>	13%	8%	<b>6%</b> --	18%	<b>22%</b> ++	13%	12%	14%	14%	7%	12%	17%	10%	15%	12%
<b>Don't know</b>	1%	0%	0%	0%	1%	1%	0%	1%	1%	0%	1%	0%	1%	0%	0%
Chi2:	-	99.9					90		-				-		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Reading print materials such as flyers, posters or pamphlets															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18F Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>LIKELY (1-2)</b>	79%	74%	85%	79%	81%	81%	80%	78%	81%	<b>65%</b> ----	<b>93%</b> +++	84%	76%	86%	74%
<b>NOT LIKELY (3-4)</b>	20%	26%	15%	21%	17%	17%	18%	21%	17%	<b>35%</b> ++++	<b>7%</b> --	14%	24%	14%	25%
<b>Very likely</b>	44%	<b>28%</b> --	54% +	39%	52%	<b>54%</b> ++	49% +	39% -	40%	36%	55% +	<b>53%</b> ++	51%	42%	43%
<b>Somewhat likely</b>	35%	46% +	31%	39%	29%	<b>27%</b> --	31% --	39%	<b>41%</b> ++	29%	38%	31%	<b>24%</b> --	44%	31%
<b>Nov very likely</b>	11%	16%	12%	11%	12%	<b>5%</b> --	11%	12%	<b>6%</b> ---	<b>24%</b> ++++	6%	9%	10%	11%	12%
<b>Not at all likely</b>	8%	10%	3%	10%	5%	12%	8%	9%	11% +	11%	<b>1%</b> --	5%	13%	3%	13%
<b>Don't know</b>	1%	0%	0%	0%	2%	3%	1%	1%	2%	0%	0%	2%	1%	0%	1%
Chi2:	-	90					-		(99.9)				-		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Participating in special events, such as public information meetings or telephone town halls															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18G Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>LIKELY (1-2)</b>	24%	26%	25%	18%	23%	29%	23%	25%	27%	<b>15%</b>	35%	23%	22%	29%	24%
<b>NOT LIKELY (3-4)</b>	75%	74%	75%	82%	76%	70%	77%	74%	73%	<b>85%</b>	<b>62%</b>	76%	77%	71%	76%
<b>Very likely</b>	9%	13%	9%	<b>3%</b>	11%	10%	9%	10%	12%	9%	11%	5%	14%	4%	<b>16%</b>
<b>Somewhat likely</b>	15%	13%	17%	15%	12%	19%	14%	15%	15%	<b>6%</b>	24%	19%	8%	<b>24%</b>	<b>8%</b>
<b>Nov very likely</b>	40%	<b>55%</b>	41%	33%	37%	<b>30%</b>	40%	39%	38%	<b>56%</b>	28%	<b>31%</b>	<b>25%</b>	42%	39%
<b>Not at all likely</b>	36%	<b>19%</b>	33%	<b>49%</b>	39%	40%	36%	35%	34%	29%	34%	<b>44%</b>	<b>52%</b>	29%	37%
<b>Don't know</b>	1%	0%	0%	0%	1%	1%	1%	1%	1%	0%	3%	1%	1%	0%	0%
Chi2:	-	95					-		(99)				99		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Using social media, like Facebook and Twitter															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18H Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>LIKELY (1-2)</b>	32%	<b>70%</b> ++++	34%	<b>22%</b> --	<b>16%</b> ----	<b>10%</b> ----	<b>19%</b> ----	<b>45%</b> ++++	36%	38%	<b>20%</b> --	26%	<b>19%</b> ---	35%	36%
<b>NOT LIKELY (3-4)</b>	67%	<b>30%</b> ----	66%	<b>78%</b> ++	<b>84%</b> ++++	<b>89%</b> ++++	<b>81%</b> ++++	<b>54%</b> ----	63%	62%	<b>80%</b> ++	74%	<b>80%</b> +++	65%	64%
<b>Very likely</b>	13%	<b>25%</b> +++	18%	11%	9%	<b>3%</b> ----	<b>6%</b> ----	<b>20%</b> ++++	<b>20%</b> +++	10%	7%	9%	8%	<b>23%</b> +++	19%
<b>Somewhat likely</b>	19%	<b>45%</b> ++++	16%	11%	<b>8%</b> --	<b>6%</b> ----	<b>12%</b> --	<b>25%</b> +++	16%	<b>28%</b> ++	12%	17%	11%	12%	17%
<b>Nov very likely</b>	18%	15%	<b>28%</b> ++	<b>32%</b> ++++	<b>11%</b> --	<b>9%</b> ----	23%	15%	18%	<b>29%</b> +++	22%	<b>10%</b> --	15%	22%	21%
<b>Not at all likely</b>	49%	<b>15%</b> ----	<b>38%</b> --	45%	<b>73%</b> ++++	<b>80%</b> ++++	<b>59%</b> ++++	<b>40%</b> ----	46%	<b>33%</b> ----	59%	<b>64%</b> ++++	<b>65%</b> +++	43%	42%
<b>Don't know</b>	0%	0%	0%	0%	0%	1%	0%	1%	1%	0%	0%	0%	1%	0%	0%
Chi2:	-	99.9					99.9		99.9				90		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Taking notice of billboards															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q181 Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>LIKELY (1-2)</b>	58%	66%	59%	58%	59%	<b>46%</b>	57%	59%	60%	58%	50%	60%	63%	68%	57%
<b>NOT LIKELY (3-4)</b>	41%	34%	41%	41%	41%	<b>50%</b>	42%	40%	39%	41%	50%	39%	35%	<b>30%</b>	43%
<b>Very likely</b>	21%	22%	21%	17%	23%	20%	20%	22%	21%	26%	23%	15%	<b>32%</b>	28%	22%
<b>Somewhat likely</b>	37%	43%	39%	41%	35%	<b>26%</b>	37%	37%	38%	32%	27%	45%	31%	40%	35%
<b>Nov very likely</b>	21%	20%	24%	20%	18%	28%	22%	21%	<b>15%</b>	25%	<b>41%</b>	19%	<b>12%</b>	19%	16%
<b>Not at all likely</b>	19%	14%	17%	21%	24%	22%	20%	19%	23%	16%	10%	20%	23%	12%	<b>27%</b>
<b>Don't know</b>	1%	0%	0%	1%	0%	4%	1%	1%	2%	1%	0%	1%	3%	2%	0%
Chi2:	-	-					-		90				-		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Are there other options you would prefer? : BY MAIL, NEWSLETTER, FLYERS, PAMPHLETS, ON TAX PROPERTY NOTICE, ON UTILITY BILLS															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18K Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	34	5	6	5	9	10	21	13	4	8	6	16	6	10	6
Total:	39	2	6	4	16	11	15	24	8	8	6	17	5	12	7
<b>LIKELY (1-2)</b>	82%	100%	50%	86%	84%	88%	82%	81%	100%	50%	89%	91%	83%	72%	89%
<b>NOT LIKELY (3-4)</b>	4%	0%	11%	14%	0%	0%	0%	10%	0%	16%	0%	0%	0%	0%	11%
<b>Very likely</b>	77%	100%	50%	86%	80%	75%	76%	78%	72%	50%	89%	88%	83%	68%	89%
<b>Somewhat likely</b>	5%	0%	0%	0%	5%	12%	6%	3%	28%	0%	0%	3%	0%	4%	0%
<b>Nov very likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Not at all likely</b>	4%	0%	11%	14%	0%	0%	0%	10%	0%	16%	0%	0%	0%	0%	11%
<b>Don't know</b>	14%	0%	39%	0%	16%	12%	18%	8%	0%	34%	11%	9%	17%	28%	0%
Chi2:	-	-					-		-				-		
Margin of Error,around 50%	15.69	69.30	40.01	49.00	24.50	29.55	25.30	20.00	34.65	34.65	40.01	23.77	43.83	28.29	37.04

Are there other options you would prefer? : CALENDAR															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18L Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	6	0	0	2	4	0	3	3	5	0	1	0	1	3	1
Total:	8	0	0	3	5	0	3	5	7	0	1	0	1	3	2
<b>LIKELY (1-2)</b>	53%	0%	0%	33%	63%	0%	67%	38%	60%	0%	0%	0%	0%	100%	0%
<b>NOT LIKELY (3-4)</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Very likely</b>	53%	0%	0%	33%	63%	0%	67%	38%	60%	0%	0%	0%	0%	100%	0%
<b>Somewhat likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Nov very likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Not at all likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Don't know</b>	47%	0%	0%	67%	37%	0%	33%	62%	40%	0%	100%	0%	100%	0%	100%
Chi2:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Margin of Error,around 50%	34.65	*	*	56.58	43.83	*	56.58	43.83	37.04	*	*	*	*	56.58	69.30

Are there other options you would prefer? : NEWSPAPERS, RADIO, TV															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18M Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	12	0	4	3	1	5	6	6	7	3	2	2	0	4	2
Total:	16	0	3	3	2	8	4	12	9	3	1	3	1	5	2
<b>LIKELY (1-2)</b>	85%	0%	100%	78%	100%	74%	80%	89%	71%	100%	100%	100%	100%	100%	100%
<b>NOT LIKELY (3-4)</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Very likely</b>	81%	0%	100%	78%	100%	63%	80%	81%	71%	100%	100%	70%	100%	87%	100%
<b>Somewhat likely</b>	4%	0%	0%	0%	0%	11%	0%	8%	0%	0%	0%	30%	0%	13%	0%
<b>Nov very likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Not at all likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Don't know</b>	15%	0%	0%	22%	0%	26%	20%	11%	29%	0%	0%	0%	0%	0%	0%
Chi2:	-	-					-		-				-		
Margin of Error,around 50%	24.50	*	56.58	56.58	69.30	34.65	49.00	28.29	32.67	56.58	*	56.58	*	43.83	69.30



Are there other options you would prefer? : BY EMAIL															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18N Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	7	0	1	4	1	0	4	2	3	0	2	1	0	2	2
Total:	7	0	1	3	2	1	3	4	3	1	1	2	0	2	3
<b>LIKELY (1-2)</b>	64%	0%	100%	42%	100%	100%	62%	69%	80%	100%	0%	100%	0%	100%	71%
<b>NOT LIKELY (3-4)</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Very likely</b>	64%	0%	100%	42%	100%	100%	62%	69%	80%	100%	0%	100%	0%	100%	71%
<b>Somewhat likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Nov very likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Not at all likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Don't know</b>	36%	0%	0%	58%	0%	0%	38%	31%	20%	0%	100%	0%	0%	0%	29%
Chi2:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Margin of Error,around 50%	37.04	*	*	56.58	69.30	*	56.58	49.00	56.58	*	*	69.30	*	69.30	56.58

Are there other options you would prefer? : BY TELEPHONE															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q180 Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	5	1	2	0	0	2	3	2	2	0	1	2	2	2	0
Total:	5	1	2	0	0	2	2	3	1	1	1	2	1	2	0
<b>LIKELY (1-2)</b>	91%	100%	100%	0%	0%	71%	100%	80%	100%	0%	100%	100%	100%	100%	0%
<b>NOT LIKELY (3-4)</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Very likely</b>	65%	0%	100%	0%	0%	71%	100%	26%	100%	0%	0%	100%	100%	32%	0%
<b>Somewhat likely</b>	26%	100%	0%	0%	0%	0%	0%	55%	0%	0%	100%	0%	0%	68%	0%
<b>Nov very likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Not at all likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Don't know</b>	9%	0%	0%	0%	0%	29%	0%	20%	0%	100%	0%	0%	0%	0%	0%
Chi2:	-	-					-		-				-		
Margin of Error,around 50%	43.83	*	69.30	*	*	69.30	69.30	56.58	*	*	*	69.30	*	69.30	*

Are there other options you would prefer? : INTERNET, WEBSITES (GENERAL)															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18P Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	4	0	1	1	1	0	1	2	1	1	1	0	0	1	0
Total:	5	0	1	2	1	1	1	4	2	2	1	0	0	1	0
<b>LIKELY (1-2)</b>	51%	0%	100%	50%	0%	100%	0%	73%	100%	48%	0%	0%	0%	100%	0%
<b>NOT LIKELY (3-4)</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Very likely</b>	51%	0%	100%	50%	0%	100%	0%	73%	100%	48%	0%	0%	0%	100%	0%
<b>Somewhat likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Nov very likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Not at all likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Don't know</b>	49%	0%	0%	50%	100%	0%	100%	27%	0%	52%	100%	0%	0%	0%	0%
Chi2:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Margin of Error,around 50%	43.83	*	*	69.30	*	*	*	49.00	69.30	69.30	*	*	*	*	*

Are there other options you would prefer? : OTHER															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
Q18Q Please rate the following options in terms of how likely you are to get information about Oxford County from each of them in the future.															
Weighted Total:	20	9	0	3	2	5	6	13	14	2	1	2	6	0	1
Total:	14	1	0	3	3	6	5	9	7	3	1	3	8	0	2
<b>LIKELY (1-2)</b>	75%	100%	0%	78%	44%	57%	64%	80%	82%	51%	0%	100%	49%	0%	29%
<b>NOT LIKELY (3-4)</b>	2%	0%	0%	0%	0%	10%	0%	4%	3%	0%	0%	0%	9%	0%	0%
<b>Very likely</b>	75%	100%	0%	78%	44%	57%	64%	80%	82%	51%	0%	100%	49%	0%	29%
<b>Somewhat likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Nov very likely</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Not at all likely</b>	2%	0%	0%	0%	0%	10%	0%	4%	3%	0%	0%	0%	9%	0%	0%
<b>Don't know</b>	22%	0%	0%	22%	56%	33%	36%	16%	15%	49%	100%	0%	42%	0%	71%
Chi2:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Margin of Error,around 50%	26.19	*	*	56.58	56.58	40.01	43.83	32.67	37.04	56.58	*	56.58	34.65	*	69.30

Age															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
AGEX															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<25	11%	<b>43%</b> ++++	<b>0%</b> ---	<b>0%</b> ----	<b>0%</b> ----	<b>0%</b> ----	<b>0%</b> ----	<b>21%</b> ++++	<b>16%</b> +++	10%	<b>0%</b> ---	8%	<b>0%</b> ----	11%	9%
25-34	14%	<b>57%</b> ++++	<b>0%</b> ----	<b>0%</b> ----	<b>0%</b> ----	<b>0%</b> ----	12%	17%	<b>7%</b> ----	<b>25%</b> +++	12%	17%	16%	17%	<b>21%</b> ++
35-44	16%	<b>0%</b> ---	<b>100%</b> ++++	<b>0%</b> ----	<b>0%</b> ----	<b>0%</b> ----	16%	16%	12%	21%	11%	19%	12%	20%	22% +
45-54	20%	<b>0%</b> ----	<b>0%</b> ----	<b>100%</b> ++++	<b>0%</b> ----	<b>0%</b> ----	<b>24%</b> ++	<b>16%</b> --	<b>25%</b> ++	14%	22%	17%	16%	16%	25%
55-64	16%	<b>0%</b> ---	<b>0%</b> ----	<b>0%</b> ----	<b>100%</b> ++++	<b>0%</b> ----	20%	13%	19%	10%	24%	15%	16%	18%	20%
65+	21%	<b>0%</b> ----	<b>0%</b> ----	<b>0%</b> ----	<b>0%</b> ----	<b>100%</b> ++++	<b>27%</b> ++	<b>15%</b> --	19%	20%	26%	23%	<b>40%</b> ++++	18%	<b>2%</b> ----
No response	1%	0%	0%	0%	0%	0%	1%	2%	1%	1%	5% +	1%	0%	0%	0%
Chi2:	-	99.9					(99.9)		(99)				(99.9)		
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

<b>Gender</b>															
	<b>Total</b>	<b>Age</b>					<b>Gender</b>		<b>Region</b>				<b>Annual household income</b>		
		<b>&lt;35</b>	<b>35-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65+</b>	<b>Male</b>	<b>Female</b>	<b>Wood-stock</b>	<b>Tillson-burg</b>	<b>Ingersoll</b>	<b>Rural Oxford</b>	<b>&lt;\$40K</b>	<b>\$40-80K</b>	<b>\$80K+</b>
OSEX															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Male</b>	48%	<b>23%</b>	49%	<b>59%</b>	<b>58%</b>	<b>62%</b>	<b>100%</b>	<b>0%</b>	42%	<b>58%</b>	44%	51%	50%	50%	52%
		----		++	++	+++	++++	----	-	++					
<b>Female</b>	52%	<b>77%</b>	51%	<b>41%</b>	<b>42%</b>	<b>38%</b>	<b>0%</b>	<b>100%</b>	58%	<b>42%</b>	56%	49%	50%	50%	48%
		++++		--	--	---	----	++++	+	--					
Chi2:	-	99.9					99.9		90						
Margin of Error,around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

Municipality (based on respondent given postal code or imported postal code)															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Woodstock	Tillsonburg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
REG															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<b>Woodstock</b>	40%	38%	31%	<b>50%</b>	47%	36%	36%	45%	<b>100%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	35%	47%	38%
			-	++			-	+	++++	----	----	----			
<b>Tillsonburg</b>	22%	30%	30%	16%	<b>13%</b>	21%	<b>27%</b>	<b>18%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>	28%	23%	22%
			+		--		++	--	----	++++	----	----			
<b>Ingersoll</b>	11%	5%	7%	12%	16%	14%	10%	12%	<b>0%</b>	<b>0%</b>	<b>100%</b>	<b>0%</b>	9%	7%	11%
									----	----	++++	----			
<b>South-West Oxford</b>	4%	1%	4%	6%	1%	<b>9%</b>	5%	4%	<b>0%</b>	<b>0%</b>	0%	<b>17%</b>	5%	6%	6%
						++			----	--	-	++++			
<b>Blandford-Blenheim</b>	5%	9%	9%	3%	7%	<b>0%</b>	3%	8%	<b>0%</b>	<b>0%</b>	0%	<b>20%</b>	2%	4%	4%
						---	-	+	----	--	-	++++			
<b>Norwich</b>	7%	8%	10%	3%	4%	8%	6%	8%	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>26%</b>	6%	7%	5%
									----	---	--	++++			
<b>Zorra</b>	8%	8%	6%	10%	8%	9%	<b>12%</b>	<b>5%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>31%</b>	<b>14%</b>	4%	12%
							++	--	----	---	--	++++	++		+
<b>East Zorra-Tavistock</b>	2%	0%	2%	0%	4%	3%	3%	1%	<b>0%</b>	0%	0%	<b>6%</b>	0%	1%	2%
							+	-	--			++++			
<b>Unknown</b>	0%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	2%	0%
Chi2:	-	(95)					(99)		(99.9)				-		
Margin of Error, around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51

What is your annual HOUSEHOLD income from all sources before taxes?															
	Total	Age					Gender		Region				Annual household income		
		<35	35-44	45-54	55-64	65+	Male	Female	Wood-stock	Tillson-burg	Ingersoll	Rural Oxford	<\$40K	\$40-80K	\$80K+
QINC															
Weighted Total:	405	102	64	81	66	85	195	210	163	91	44	106	65	77	97
Total:	405	38	72	77	101	111	136	269	165	79	54	106	81	73	87
<\$10,000	1%	1%	3%	0%	1%	1%	1%	2%	1%	1%	0%	2%	8%	0%	0%
			+										++++		
\$10,000-\$19,999	4%	0%	3%	5%	3%	9%	2%	6%	3%	7%	2%	4%	24%	0%	0%
						+++				+			++++	-	--
\$20,000-\$29,999	4%	5%	3%	2%	4%	6%	4%	4%	4%	6%	6%	1%	24%	0%	0%
												1%	----	-	--
\$30,000-\$39,999	7%	5%	2%	6%	9%	14%	10%	4%	6%	6%	6%	10%	44%	0%	0%
						+++	++	--					++++	---	---
\$40,000-\$49,999	7%	11%	4%	4%	10%	5%	5%	9%	10%	3%	5%	6%	0%	36%	0%
									++	-			---	++++	---
\$50,000-\$59,999	5%	6%	9%	1%	5%	5%	6%	4%	1%	11%	4%	6%	0%	26%	0%
									---	+++			--	++++	--
\$60,000-\$79,999	7%	4%	12%	11%	6%	6%	9%	5%	11%	5%	3%	3%	0%	38%	0%
									++				---	++++	---
\$80,000-\$99,999	11%	18%	20%	11%	5%	1%	9%	13%	11%	11%	13%	12%	0%	0%	47%
		+	++			----							----	----	++++
\$100,000-\$119,999	6%	6%	5%	8%	12%	0%	8%	4%	8%	6%	1%	5%	0%	0%	24%
					+++	---	+	-					--	--	++++
\$120,000 or more	7%	5%	9%	11%	12%	1%	9%	5%	4%	7%	11%	10%	0%	0%	29%
					++	--			-				---	---	++++
Don't know / No response	41%	40%	30%	42%	34%	50%	37%	44%	41%	37%	49%	41%	0%	0%	0%
Chi2:	-	(99.9)					(95)		(95)				(99.9)		
Margin of Error, around 50%	4.87	15.90	11.55	11.17	9.75	9.30	8.40	5.98	7.63	11.03	13.34	9.52	10.89	11.47	10.51



## **APPENDIX C – Let’s Talk Public Works Campaign 2013**



**COUNTY OF OXFORD**

21 Reeve Street, Woodstock, ON N4S 7Y3  
519.539.9800 | 1.800.755.0394  
www.oxfordcounty.ca

## Summary of public feedback on IWMP (via website)

**DATE:** Compiled October 18, 2013 | *Shown in order of most recently received between September 6 and 26*

Subject: Public Works

Comment: In the interest of improving service, are you really interested in what taxpayers have to say? Or are you only encouraging comments within predefined limits? There is no opportunity for comment in the online survey on the integrated waste management plan. Obviously for urban municipalities that could benefit from green box compost collection, you would rather not poll us on our preferences. You might be surprised at the results from more progressive communities like Ingersoll & Tillsonburg. They may be willing to have a user pay system for this service. If we leave it up to the politicians to somehow represent our interests, green box will never happen. Of course green box is expensive. But until you ask the people (ie through your online survey) you will never be able to gauge the interest. User pay may be preferable to backyard composting in urban areas. But you will never know.

Subject: Public Works

Comment: Bill 91 is pressing for household waste reduction. Bag tag increases would be annoying but not effective to the cause. Two week pick up would cause odor, insects, and attract varmint. Introduction of a green box program and an opportunity to dispose through the local transfer station should be a considered option.

"They should collect recycling weekly. It would reduce the weekly waste."

Subject: Public Works

Comment: Here are my thoughts of garbage and water rates. It seems popular in Oxford county and Woodstock to implement charges and fees as "cost recovery" for services rendered. Cost recovery is a model where the cost of the service is offset by the fee residence pay. That is great. Property and municipal taxes however pay for the respective municipalities to provide the services. Looking at the larger picture is important here. The municipality collects money via taxes to have the services, and then charges residence for the service as cost recovery or pay for use. While I fully support that the bag tag and water meter system help to suppress waste in our community, I do have an ethical issue with the double dipping in

taxpayers wallets.
<p>Subject: Public Works</p> <p>Comment: How about garbage bi-weekly, and recycling every week. Would promote recycling and not effect costs too much.</p>
"Wish they'd end the tag bag thing and just make it part of the taxes cuz the garbage being tossed in ditches and side roads isn't pretty and ends up costing anyways"
"Finally a "Suggested Post" that was useful!"
"we don't need tax dollars wasted on trails...our taxes could be used so much more wisely, so that everyone can enjoy the benefits from our tax dollars, not just a few."
"I await my free bag tag. :)"
<p>Category:: General</p> <p>hello. i took your survey on garbage and water... asked if i wanted a free tag then i just got a thank you page with no where to enter my address. does that need to be fixed??</p>
<p>Subject: Public Works</p> <p>Comment: I read that Oxford thinking of cutting garbage pick up to every other week. I am all for that and generally only put my garbage out every other week anyway. However, I feel that recycling should be more often as I am putting out 4-5 bins every other week. I would also like green bins to be implemented. I do compost my waste but as I don't garden it isn't used for anything other than to keep it out of the landfill.</p>
<p>Category: Garbage and Recycling</p> <p>To whom it may concern:  I'm 53 yrs old and on a fixed income(CPPD).  I have to purchase garbage tags at 1.50\$/per and by what I have read the city wants to raise that.  Please consider people like myself who can barely afford it now.  I do recycle but yet by myself I create up to 3 bags of garbage a month.  So please do not raise the price of tags.</p>

Thank you.

Category: Garbage and Recycling

I totally disagree with the Bag Tag fees. I don't think you realize the lengths people go to, to avoid buying them. Here are just some examples.

If they work out of town, they take their garbage there, thus putting it on another municipality.

They bring a bag of garbage with them every time they go shopping and place it in the stores' outside garbage containers. Then the stores have to pay for it to be removed.

They burn it illegally.

They drive it somewhere inconspicuous and dump it.

They fill the new builders'/contractors garbage hoppers at night when no one is around.

They throw it out the car window as they drive-this is especially common with fast food containers.

They put it in donation bins.

Renters pile garbage in their yards and the landlord has to dispose of it.

I have seen and know all of these to be true.

The taxes in Woodstock are very high compared to surrounding areas, it should include garbage pickup

The city needs to outsource its garbage/recycling program if not doing so. It is cheaper .

Recycle bins should be provided free of charge to homeowners to encourage this habit.

Category: Garbage and Recycling

Personally, I think any hike in price of the garbage tags an unwelcome tax on people who are on fixed incomes. I am in favour of a garbage pick up once every two weeks to encourage and improve the incentive to recycle kitchen waste. Perhaps more facility of access to compost bins would be beneficial to apartment complexes and housing developments. Perhaps a contest to develop central odour free collection systems would be an incentive to move ahead in this initiative.

Subject: Public Works

Comment: Woodstock should be going in the direction of becoming green. Although cost is a factor it shouldn't be the only factor. Recycling should & needs to be picked up every week. So many people I talk too say they have so much recycling at the end of 2 weeks we don't know where to store it anymore, in fact several people I know don't recycle for this reason. I decided to take it to the depot but it's closed at 3 o'clock and weekends. So I bought a bigger bin but it was not picked up. The large orange sticker they put on it stated it was bigger than the acceptable size and therefore too heavy. It was only a few litres over and definitely not heavy at all. I'm very dedicated to 'green issues' and feel Oxford County should be leading us in that direction. Thank you

Subject: Public Works

Comment: recycle pick up should be EVERY WEEK;

Subject: Public Works

Comment: I am wondering why we don't have a curb side composting program. I am aware that it would require money, but you can sell the soil created to cover some cost, plus you could change garbage pick up to bi-weekly year round since we won't have rotting food in our garbage cans. Composting could possibly be bi-weekly as well during the winter months. As for the containers them selves can be purchased by oxford citizens at cost. Most cities are doing this already, I think it is time to catch up. I would personally volunteer any time that I have to help make this program become a reality.

Subject: Public Works

Comment: Property taxes are already too high in Woodstock and we are forced to pay for every garbage bag we throw out on top of that. No more increases! And get rid of garbage bag tags!

Subject: Public Works

Comment: Disposal of antifreeze and Styrofoam at the public yard. And strongly object to this excessive dump truck traffic on Lansdowne ave to fill in land on new subdivision off Devonshire. This should have been done by the developer with earth movers before development took place. It is about time you open a new road from Dundas St. to Devonshire Ave via Anderson Motors to relieve pressure of Lansdowne, due to new subdivision and developments. Thank You.

**APPENDIX D – Facilitated Councillor Workshops Council Reports**

**To: Warden and Members of County Council**

**From: Director of Public Works**

## **Integrated Waste Management Plan Facilitated Councillor Workshop: Updated Presentation and Discussion Material**

### **RECOMMENDATION**

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- 1. That County Council receive Report PW 2013-50 for use at the Councillor Workshop on September 11, 2013.**

### **REPORT HIGHLIGHT**

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- To provide County Council with an updated presentation as Attachment 1 and discussion materials as Attachment 2 for the Integrated Waste Management Plan (IWMP) Facilitated Councillor Workshop to be held on September 11, 2013.

### **Financial Impact**

The recommendations contained in this report do not have any financial impact on the 2013 budget. Decisions made as part of the IWMP may have impact on 2014 and later budgets but Council will have the opportunity to review the impact through the IWMP and future County budgets.

The Treasurer has reviewed this report and agrees with the financial impact information.

### **Risks/Implications**

The updated presentation and discussion materials reflect progress made by the County and the Ontario government since the April 10<sup>th</sup> Facilitated Councillor Workshop.

## Strategic Plan

The initiatives contained within this report support the values and strategic directions as set out in the Strategic Plan as it pertains to the following Strategic Directions:

### 3. A County that *Thinks Ahead and Wisely Shapes the Future*

- iii) Apply social, financial and environmental sustainability lenses to significant decisions by assessing options in regards to:
  - Responsible environmental stewardship.

### 4. A County that *Informs and Engages*

- i) Better harness the power of the community through conversation and dialogue by:
  - Enhancing opportunities for public participation under meaningful voice on civic affairs.

### 5. A County that *Performs and Delivers Results*

- ii) Deliver exceptional services by:
  - Conducting regular service reviews to ensure delivery effectiveness and efficiency.

## DISCUSSION

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### Background

On April 10, 2013, staff held a facilitated workshop for Councillors to obtain more information on the progress made to date on the IWMP. Input obtained from this workshop was reported back to County Council at the June 26<sup>th</sup> meeting for further consideration and direction.

Due to the amount of information, only part of the presentation and discussion materials was covered on April 10<sup>th</sup>. As a result, staff obtained approval from Council to host a second workshop scheduled for September 11<sup>th</sup> to review the remaining information.

### Comments

Since the April 10<sup>th</sup> Councillor Workshop, the County has undertaken several community engagement initiatives. As well, the provincial government has released a proposed Waste Reduction Framework for Ontario, consisting of a proposed Waste Reduction Act and a proposed Waste Reduction Strategy. The presentation and discussion material distributed to Council on April 10<sup>th</sup> has been revised to reflect this information. As well, the presentation material covered during the April 10<sup>th</sup> meeting has been omitted from the presentation and discussion material contained in this report.

Staff are also working on the public engagement portion of the IWMP. The on-line survey is now live and advertisement of "Speak Up Oxford" will start the week of September 2<sup>nd</sup>. The County has also obtained market data using the services of EKOS Research. The customer data will all be compiled and presented to Council as part of the IWMP.



## Conclusions

The Councillor Workshop on September 11, 2013 is another important stage in the IWMP process. Staff look forward to the workshop and making further progress towards the completion of the IWMP.

## SIGNATURE

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### Report Author

Original signed by

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Pamela Antonio  
Waste Management Coordinator

### Departmental Approval:

Original signed by

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Robert Walton, P.Eng.  
Director of Public Works

### Approved for submission:

Original signed by

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Peter M. Crockett, P.Eng.  
Chief Administrative Officer

## ATTACHMENTS

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- Attachment 1 Integrated Waste Management Plan: County Council Facilitate Workshop Presentation, September 11, 2013 (PA)
- Attachment 2 Integrated Waste Management Plan: County Council Facilitate Workshop, Discussion Sheets September 11, 2013 (PA)

## Integrated Waste Management Plan

**County Council  
Facilitated  
Workshop**

**September 11, 2013**



## Purpose of Workshop

- A continuation of the April 10<sup>th</sup> workshop which covered:
  - Overview of the Draft IWMP Interim Report
  - Facilitated discussion on Source Separated Organics and Curbside Collection and Processing Contracts
- Today, through a facilitated discussion, obtain Council perspective on:
  - IC&I Reduction/Diversion Opportunities
  - Waste Management Sustainability Plan
  - Program Metrics
  - Public Engagement Options
- Report to Council on these discussions in October



## Workshop Agenda and Format

- Review Project Time Line
- Review June 26<sup>th</sup> IWMP Council Report Recommendations
- Facilitated Discussion of Workshop Topics
  - IC&I Reduction/Diversion Opportunities
  - Waste Management Sustainability Plan
  - Program Metrics
  - Public Engagement Options
- Next Steps



## Project Time Line

Oxford County Integrated Waste Management Plan Critical Path													
Task	Feb-12	Mar-12	Jun-12	Jan-13	Feb-13	Apr-13	Jun-13	Aug-13	Sep-13	Oct-13	Jan-14	Apr-14	
Start of Project	█												
Electronic Survey	█	█											
1st Steering Committee Meeting		█											
2nd Steering Committee Meeting			█										
Draft IWMP Interim Report				█									
Report to Council - Draft IWMP Interim Report					█								
Councillor Workshop						█							
Report to Council - Workshop Recommendations							█						
Extend Curbside Collection and Processing Contracts								█					
Community Engagement - Telephone Survey									█				
Councillor Workshop										█			
Municipal Meetings											█		
Public Consultation												█	
3rd Steering Committee Meeting													█
Report to Council - Workshop Recommendations													
Final IWMP Report to Council													
Release Processing and Collection RFP's													



## June 26<sup>th</sup> IWMP Council Report Recommendations

Recommendations	Result
Curbside Organics Collection	✗
Re-launch backyard composting program	✓
Extend Curbside Collection and Recycling Processing Contracts	✓
Approve Communication and Engagement Plan	✓

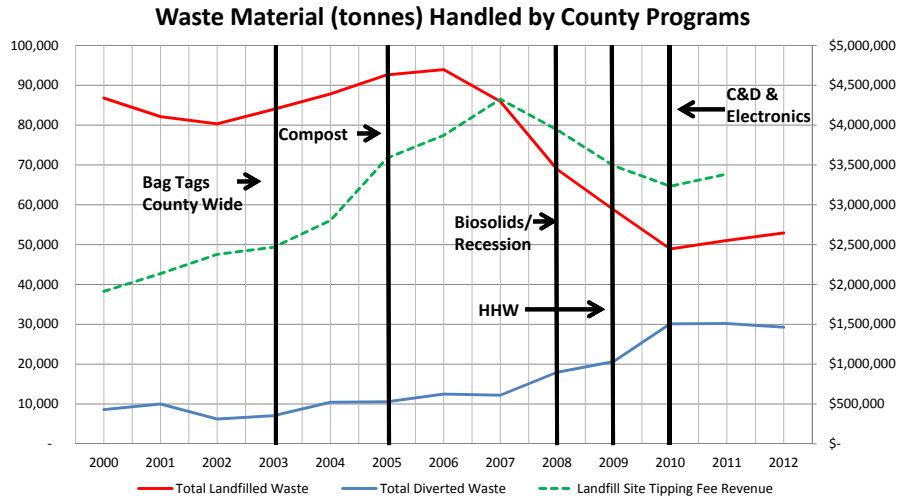


## Workshop Items for Discussion

- **IC&I Reduction/Diversion Opportunities**
- **Waste Management Sustainability Plan**
- **Program Metrics**
- **Public Engagement Options**



## IC&I Reduction/Diversion Opportunities



## IC&I Reduction/Diversion Opportunities

### Commercial Business

- High cardboard contamination
- Lack of onsite management of cardboard
- Some cardboard not suitable for recycling



## IC&I Reduction/Diversion Opportunities

### Commercial Business

- Primarily garbage
- Some film plastic contamination



## IC&I Reduction/Diversion Opportunities

### Industrial

- Unique waste material not easily recycled



## IC&I Reduction/Diversion Opportunities

### What's the government doing?

- IC&I reduction/diversion regulated by the province
  - Ontario Regulation 103/94 prescribes that industrial, commercial and institutional implement source separation programs
- MOE recently developed a Waste Reduction Framework for Ontario, consisting of:
  - Proposed Waste Reduction Act
  - Proposed Waste Reduction Strategy



## The Proposed Waste Reduction Act (WRA)

- WRA will replace the current Waste Diversion Act, making individual producers accountable for proper end-of-life management of their products
- Producers responsible for meeting:
  - Waste reduction standards
  - Service standards for consumer accessibility and convenience
  - Promotion and education requirements
- Municipalities may register to receive compensation for the collection of any designated waste
  - Reimbursement to include costs for collecting, handling, transporting and storage of waste as well as processing and disposal of designated waste
  - Municipalities will have to enter into agreements with the producer(s)

## The Proposed Waste Reduction Strategy

- Waste Reduction Strategy will provide a blue print for increasing diversion
  - Outlines vision to move towards zero waste and fostering economic and environmental innovation
  - Sets desired results, steps and a timeline for an orderly and smooth transition of existing diversion programs
- Impact on municipal waste management programs:
  - Possible increase in blue box funding (greater than 50%)
  - Increase administrative responsibilities pertaining to reporting and program management
  - Current programs will change, with future program scope and delivery dictated by the producer

## Proposed Time Frames

Action Item	Short Term (1-2 yrs)	Medium Term (2-4 yrs)	Long Term (4 yrs & Beyond)
Blue Box	<ul style="list-style-type: none"> <li>• Consult on funding model and roles and responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>• Continued consultation</li> <li>• First steps to increase funding and responsibility; begin transition</li> </ul>	<ul style="list-style-type: none"> <li>• Continue transition of program</li> </ul>
Transition <u>other</u> existing programs	<ul style="list-style-type: none"> <li>• Consult and complete transition of WEEE</li> <li>• Begin transition of MHSW</li> </ul>	<ul style="list-style-type: none"> <li>• Complete MHSW transition; begin transition of Used Tires</li> </ul>	<ul style="list-style-type: none"> <li>• Complete transition of Used Tires</li> </ul>
Designate IC&I paper and packaging	<ul style="list-style-type: none"> <li>• Consult on designating IC&amp;I paper &amp; packaging</li> <li>• Begin review of 3Rs Regs</li> </ul>	<ul style="list-style-type: none"> <li>• Designate a subset of IC&amp;I paper &amp; packaging under proposed Act</li> </ul>	<ul style="list-style-type: none"> <li>• Continue phase-in of additional IC&amp;I paper &amp; packaging wastes</li> </ul>
Develop new standards for ELVs	<ul style="list-style-type: none"> <li>• Consult on and implement new recycling standards</li> </ul>	<ul style="list-style-type: none"> <li>• Continued implementation of standards and consult on additional measures</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to consult on additional measures</li> </ul>
Designate additional wastes	<ul style="list-style-type: none"> <li>• Consult on additional wastes that could be designated</li> </ul>	<ul style="list-style-type: none"> <li>• Designate new wastes, possibly carpets and <u>additional WEEE products</u></li> </ul>	<ul style="list-style-type: none"> <li>• Continue to designate new wastes, possibly non-food organics and bulky items</li> </ul>
Disposal bans	<ul style="list-style-type: none"> <li>• Consult on use of disposal bans, including eligible waste and timing</li> </ul>	<ul style="list-style-type: none"> <li>• Ban WEEE from disposal once transition is complete</li> </ul>	<ul style="list-style-type: none"> <li>• Ban MHSW from disposal once transition is complete</li> </ul>
Increase diversion of organics			<ul style="list-style-type: none"> <li>• Consult on a strategy for organics diversion</li> </ul>



## IC&I Reduction/Diversion Opportunities

### What are other municipalities doing?

Action	Impact
Offer blue box collection services to ICI who can meet curbside requirements	Collected material not eligible for funding by WDO; Extends collection routes; Large volumes can fill truck quickly; Increased material revenue; Less recycled material going to landfill
Increase landfill site tipping fees	Forces ICI to reduce; ICI will find an alternative landfill to send waste to; potential for decreased tipping fees which will impact landfill site revenue
Construction and Demolition Recycling	Relatively new diversion program quickly being implemented across Ontario municipalities

## IC&I Reduction/Diversion Discussion Items

- To what extent should the County be involved in advocating/driving waste reduction/ diversion activities among the IC&I sector?
- What might be some of the obstacles that would need to be overcome if the County became more involved in waste reduction/diversion activities for this sector?
- What opportunities other than landfill bans and increased landfill site tipping fees might be there to encourage IC&I reduction/diversion activities?
- What are your conclusions regarding IC&I reduction/diversion opportunities in Oxford County?

## Waste Management Sustainability Plan

- In 2009 County Council directed staff to develop a sustainability plan for Waste Management
- Opinions varied as to whether bag tag revenue should cover all or a portion of curbside garbage collection and disposal costs
- Council directed Staff to increase the price of bag tags from \$1.25 to \$1.50 in 2010 and to further study sustainability options



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## Waste Management Sustainability Plan

### Municipal Bag Tag Pricing Comparison

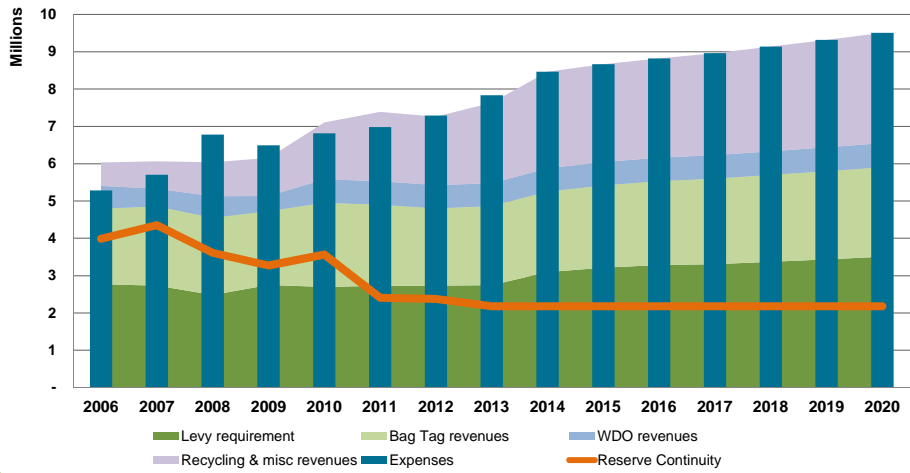
Municipality	Bag Tag Price	Large Article Tag Price
County of Wellington	\$1 - \$1.75	N/A – taken to landfill site for disposal, subject to tipping fees
Oxford County	\$1.50	N/A – free annual curbside collection
City of Kingston	\$2.00	N/A – taken to landfill site for disposal, subject to tipping fees
Kawartha Lakes	2 free bag/week, then \$2.00/bag	\$5.00/item
Blue Water Recycling Association	\$2.50/bag - varies depending on municipality	N/A – taken to landfill site for disposal, subject to tipping fees
City of Stratford*	\$2.40	\$10.00
County of Simcoe*	1 <sup>st</sup> bag \$2.00, subsequent bags-\$3.00	N/A – taken to landfill site for disposal, subject to tipping fees



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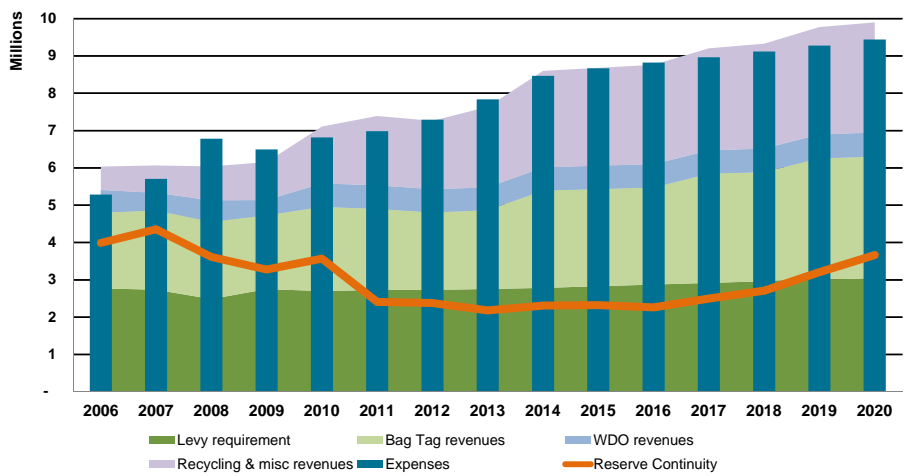
## Waste Management Sustainability Plan

Scenario A - Status Quo



## Waste Management Sustainability Plan

Scenario B



## Waste Management Sustainability Plan

- The 2013 Waste Management levy requirement is \$2.7 million of which \$675,457 comes from commercial, industrial, and large industrial properties
- Full User Pay System for Curbside Collection and Disposal with current bag tag sales may look as follows:
  - \$2.19/ bag tag – to remove curbside garbage collection, disposal, large article and administration share
  - \$2.97/bag tag = to cover 100% of curbside garbage collection, disposal, large article, recycling and admin shares
  - \$3.81/bag tag – to remove 100% of waste management costs from the tax base (all other things being equal)

**Note: Based on 2012 Unaudited Actual**



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## Waste Management Sustainability Plan Discussion Items

- What would the implications be of removing Waste Management costs from the tax base?
- What benefits do you see to removing Waste Management costs from the tax base?
- What obstacles would need to be overcome to achieve this if it were to be implemented?
- What might some of the solutions to the identified obstacles be?
- If Waste Management costs remain on the tax base should there be changes to the current user pay system or implementation of additional user pay systems to ease the burden on the tax base?
- What are your conclusion regarding the Waste Management Sustainability Plan?



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## Program Performance Metrics

### Need?

- WDO Best Practice to monitor and measure program performance and report annually to Council
- Identifies program successes and opportunities for improvement

### Measurement?

- What is the best way to measure Oxford's performance?
  - Efficiency (i.e. \$/tonne, \$/hhld, etc.)
  - Effectiveness (i.e. diversion rate, kg/hhld/capita, etc.)
  - Community Impact (i.e. landfill life, participation levels, etc.)



## Program Performance Metrics Discussion Items

- What benefit do you see in implementing program performance metrics?
- What obstacles do you see in identifying/implementing program performance metrics?
- What is the best, most meaningful way to measure waste management performance in the County?
- What are your conclusions regarding program performance metrics?

## Public Engagement

- Public engagement under the IWMP consisted of
  - 1 electronic survey (over 700 responses)
  - 2 stakeholder committee meetings
- February 27<sup>th</sup>, Council asked for more meaningful public engagement
- June 26<sup>th</sup>, Council approved Communication and Engagement Strategy for the IWMP



## Communication and Engagement Strategy

Strategic Direction	Program Objective	Comm/Engage Goal
<p><b>3. iii. A County that Thinks Ahead and Wisely Shapes the Future</b> – Apply social, financial and environmental sustainability lenses to significant decisions by assessing options in regards to responsible environmental stewardship</p>	<ul style="list-style-type: none"> <li>To increase the County’s annual Waste Diversion Ontario Funding, which is regarded as a “best practice”</li> </ul>	<p>To use the IWMP consultation process to:</p> <ul style="list-style-type: none"> <li>Increase awareness of the importance of waste diversion</li> <li>Support this goal by informing residents about the correct use of blue boxes</li> </ul>
<p><b>4. ii. A County that Informs and Engages</b> – Better harness the power of the community through conversation and dialogue by enhancing opportunities for public participation under meaningful voice on civic affairs</p>	<ul style="list-style-type: none"> <li>To understand citizen level of awareness of services</li> <li>To understand which methods are most effective for each residents</li> <li>To understand public opinion on key issues, such as structure of bag tag fees</li> </ul>	<p>To use the IWMP consultation process by reliably gauge:</p> <ul style="list-style-type: none"> <li>The baseline understanding of residents re: services</li> <li>Preferences for both one-way and two-way communication on waste management issues</li> </ul>
<p><b>5. ii. A County that Performs and Delivers Results</b> – Deliver exceptional services by conducting regular service reviews to ensure delivery effectiveness and efficiency</p>	<ul style="list-style-type: none"> <li>To revise the County’s current system to more efficiently meet present day needs and, similar to an Official Plan or Strategic Plan, provide a road map/vision for future waste management planning</li> </ul>	<p>To support the development of materials that suitably inform decision-makers and other key stakeholders, e.g., Council, staff in partner municipalities, ICI customers etc.</p>

## Strategy

Objective	Goal	Outcome
Informing	<ul style="list-style-type: none"> <li>Raise awareness of waste management issues</li> <li>Help residents understand cost and implications of programs and service delivery</li> </ul>	<ul style="list-style-type: none"> <li>To improve blue box sorting as a means of improving waste diversion</li> </ul>
Consulting	<ul style="list-style-type: none"> <li>Attain feedback through consultation that provides the County with a level of certainty regarding the priorities and preferences of its citizens</li> </ul>	<ul style="list-style-type: none"> <li>Seek public opinion about the structure of bag tag fees</li> </ul>

## Engagement Opportunities Still to Come



**Let's talk trash.**

You talk. We'll listen.  
Oxford County is looking for your feedback on how it collects and manages garbage and recycling. We want your input, because your voice adds real value to our efforts. Visit [oxfordcounty.ca/speakup](http://oxfordcounty.ca/speakup) to take our survey, learn more, or send us a question or comment.

**PLEASE ASK US FOR DIFFERENCES.**

 [www.oxfordcounty.ca/speakup](http://www.oxfordcounty.ca/speakup)



Services for You | Business in Oxford | Things to Do | Your Government

Speak up, Oxford!

**Let's talk ... Public Works.**

WASTE TALK - PUBLIC MEETING - August 15, 2016

Working public, meet our public and administrative roles, and services for garbage collection and recycling. Working public input on water and wastewater rates, and services for garbage collection and recycling. Working public input on water and wastewater rates, and services for garbage collection and recycling. Working public input on water and wastewater rates, and services for garbage collection and recycling. [View More...](#)

Speak Up, Oxford! helps make it easier and more convenient for people to voice their concerns on municipal programs and services. Some campaigns may also use the campaign features, send an email or comment us on social media.

Remember to check back for new topics at [www.oxfordcounty.ca/speakup](http://www.oxfordcounty.ca/speakup).

### Plus....

- Steering Committee Consultation
- Public Open House

## Public Engagement Options Discussion Items

- What additional engagement opportunities should the County explore and when should the engagement take place?
- What potential impact will public engagement have on contract timing?
- What issues should be addressed through public consultation?
- What additional forms of public consultation should be considered? Social media, focus groups, surveys, etc.
- Should additional public consultation be done by a third party market research company? Budget?



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## Next Steps

- Review workshop comments and input
- Prepare staff report with recommendations
- Further dialogue with Steering Committee
- Council consideration of staff report



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## Integrated Waste Management Plan Council Workshop

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### IC&I Reduction/Diversion Opportunities

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#### Key Facts and Figures

- Landfill site is no longer a disposal facility but a waste management facility
- Over 94,000 tonnes of waste was buried in 2006 compared to 53,000 tonnes in 2012
- 4,800 tonnes of material was diverted at the landfill in 2006 compared to 20,000 tonnes in 2012
- Low volumes of recyclable material (cardboard) found in ICI loads
- 2012 Tipping Fees = \$65.24 mixed solid waste; \$65.00 mixed C&D; \$15/unit surcharge for Freon removal
- 2012 Landfill site tipping fee revenue was \$3.4 million
- Landfill site projected fixed costs post closure = \$278,000/yr
- Landfill site projected fixed costs upon closing = \$335,000/yr
- ICI reduction/diversion is regulated by the Province
- Industry associations are strongly advocating for Extended Producer Responsibility (EPR) for end-of-life management of waste

#### Possible Options

- Increase tipping fees for the ICI sector and introduce variable tipping fees and material bans
- Increase and/or enhance current landfill diversion programs for the ICI sector i.e. cardboard
- Develop a curbside collection by-law with an ICI component focused on diversion and enforcement

#### Discussion Questions

- To what extent should the County be involved in advocating/driving waste reduction/ diversion activities among the IC&I sector?
- What might be some of the obstacles that would need to be overcome if the County became more involved in waste reduction/diversion activities for this sector?
- What opportunities other than landfill bans and increased landfill site tipping fees might there be to encourage IC&I reduction/diversion activities?
- What are your conclusions regarding IC&I reduction/diversion opportunities in Oxford County?



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## WASTE MANAGEMENT SUSTAINABILITY PLAN

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### Key Facts and Figures

- 2012 Bag Tag Revenue = \$2,265,815
- 2012 Curbside Garbage Costs = \$3,278,120 (*includes LAC, Tipping Fees and Admin Costs*)
- 2012 Curbside Garbage Tonnage = 14,026
- To cover 2012 garbage collection and disposal costs, the bag tag price would have needed to be \$2.18/tag (*based on current bag tag sales of 1.5 million tags*)
- Bag tag pricing among other municipalities ranges between \$1-2.5/bag with \$2/bag being the norm
- ICI collected recyclables represents approximately 8% (1,100 tonnes) of collected recyclables; collected garbage quantities unknown
- Counterfeit bag tags and failure to use bag tags is problematic
- County/City of Woodstock municipal agreement clause – bag tag revenue must be used exclusively for waste collection costs and residential waste disposal at landfill site

### Possible Options

- Implementation of a bag tag enforcement program; partial FTE required
- Maintain status quo, bag tags remain at \$1.50/bag, bag tag revenue will continue to under fund the curbside garbage collection and disposal program, and the levy requirement will continue to increase annually
- Increase bag tag pricing incrementally with the intent of covering curbside garbage collection and disposal costs; tag pricing may reach \$2.50/tag by 2018; levy requirement would reach \$2.7 million by 2018
- Remove all waste management costs from the County budget; funding through user pay system
- Implement differential bag tag pricing for the residential and ICI communities.
- Implement a user pay program for large article collection.

### Waste Management Sustainability Plan

- What would the implications be of removing Waste Management costs from the tax base?
- What benefits do you see to removing Waste Management costs from the tax base?
- What obstacles would need to be overcome to achieve this if it were to be implemented?
- What might some of the solutions to the identified obstacles be?
- If Waste Management costs remain on the tax base should there be changes to the current user pay system or implementation of additional user pay systems to ease the burden on the tax base?
- What are your conclusions regarding the Waste Management Sustainability Plan?



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## PROGRAM PERFORMANCE METRICS

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### Key Facts and Figures

- County residential diversion rate is 54%
- Provincial residential diversion target is 60%
- Total diverted material tonnage is 29,270 (*blue box, depots and event tonnages*)
- Total landfilled tonnage in 2012 was 53,000 tonnes
- Oxford County household count is 43,367 (*Stats Canada 2011 Census*)
- 20 plus years of landfill space available

### Possible Options

- WDO Diversion rate – limited to residential only
- Weight of garbage collected per capita – primarily residential
- # of bag(s)/household/week – primarily residential
- Landfill, blue box and residual waste tonnages – residential and some ICI
- Participation audits – residential and some ICI
- Annual waste audit – primarily residential
- Customer service calls – primarily residential
- Vehicle counts at events and depots - residential
- Bag tag sales – primarily residential
- Available landfill space

### Discussion Questions

- What benefit do you see in implementing program performance metrics?
- What obstacles do you see in identifying/implementing program performance metrics?
- What is the best, most meaningful way to measure waste management performance in the County?
- What are your conclusions regarding program performance metrics?



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## Public Engagement Process

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### Key Facts and Figures

- The electronic survey received a statistically valid sample of 729 response, however it is unknown if the responses are statistically valid
- Traditional methods appear to be of lesser value with changing demographic
- A public engagement process should include two-way information exchange
- The 4 I's of engagement
  - Involvement, Interaction, Intimacy, and Influence
  - Successful engagement captures broader demographic and delivers the 4 I's
- A well designed public engagement process includes both qualitative and quantitative data collection
- Use of a 3<sup>rd</sup> party market research company may result in statistically valid results with a potential project cost of \$20,000 to \$50,000 depending on the engagement process.

### Possible Options

- Open Houses / Public Information Centres
- Web Site Updates
- Information Updates Inserted in Tax or Utility Bill Mailings
- Awareness/Education campaign (advertisements, Newspaper Article interviews, social media)
- Social Media based information exchange
- Focus Groups

### Discussion Questions

- What additional engagement opportunities should the County explore and when should the engagement take place?
- What potential impact will public engagement have on contract timing?
- What issues should be addressed through public consultation?
- What additional forms of public consultation should be considered (social media, focus groups, surveys, etc.)?
- Should public consultation be done by a third party market research company? Budget?

### Public Engagement Process Comments





**To:** Warden and Members of County Council

**From:** Director of Public Works

## Integrated Waste Management Plan Update

### RECOMMENDATIONS

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1. That County Council receive Report PW No. 2013-62;
2. And further, that staff develop for Council's consideration by February 2014, a Draft Waste Management Strategy based on the Oxford County Integrated Waste Management Plan (IWMP) analysis and feedback to date.

### REPORT HIGHLIGHTS

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- To summarize discussion items and issues arising from the Integrated Waste Management Plan (IWMP) Councillor Workshop held on September 11, 2013.
- To provide Council with a progress report on the development of a bag tag pricing strategy.
- To outline next steps for project completion.

### Implementation Points

Following Council approval, staff will prepare a draft Waste Management Strategy, consultation plan and timeline for consideration by Council in early 2014.

### Financial Impact

The recommendations contained in this report do not have any financial impact on the 2013 budget. Through the 2014 Business Plan and Budget approval process Council will be presented, for consideration, Bag Tag pricing options and implications.

The Treasurer has reviewed this report and agrees with the financial impact information.

### Risks/Implications

The draft Waste Management Strategy will incorporate public input from several consultation processes as well as build on the information contained in the Genivar IWMP, Interim Report (December 2012). The draft document will represent Oxford County's waste management needs and future program direction.

## Strategic Plan

The initiatives contained within this report support the values and strategic directions as set out in the Strategic Plan as it pertains to the following Strategic Directions:

### 3. A County that *Thinks Ahead and Wisely Shapes the Future*

- iii) Apply social, financial and environmental sustainability lenses to significant decisions by assessing options in regards to:
  - Responsible environmental stewardship.

### 4. A County that *Informs and Engages*

- i) Better harness the power of the community through conversation and dialogue by:
  - Enhancing opportunities for public participation under meaningful voice on civic affairs.

### 5. A County that *Performs and Delivers Results*

- ii) Deliver exceptional services by:
  - Conducting regular service reviews to ensure delivery effectiveness and efficiency.

## DISCUSSION

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### Background

County staff facilitated a second workshop for County Council on September 11, 2013 to review the remaining discussion items not covered during the April 10, 2013 workshop. The purpose of these two facilitated sessions was to obtain Council oversight and input into the IWMP process, which will assist staff in preparation of a Waste Management Strategy.

The workshop was attended by County Councillors and members of County staff as well as facilitated by County staff.

Attachment 1, IWMP Workshop Presentation, September 11, 2013, contains the presentation material delivered by staff summarizing the planning process to date, recent provincial initiatives and discussion items. The session ran for three hours and covered all remaining discussion items before adjourning.

### IC&I Reduction / Diversion Opportunities

Participants reviewed the amount of waste material (tonnes) handled by County programs since 2000 and the impact that these programs have had on the overall life expectancy of the landfill site.

Originally set for closure in 2014, the County has successfully extended the life of the facility to a minimum of 20 years, with some third party reports calculating a life expectancy of 40 years.

On average, the County diverts approximately 28,000 tonnes of material from the landfill each year.

Initiatives that have attributed to increasing the overall life expectancy of the landfill site include the:

- Implementation of County-wide bag tags in 2003;
- Implementation of a leaf and yard waste composting program in 2005;
- Discontinuation of trucking biosolids to landfill;
- The recession in 2008; and,
- Implementation of year-round collection depots for household hazardous waste, electronics and construction and demolition materials recycling in 2009 and 2010.

Further analysis of waste material being brought to the landfill site by the Industrial, Commercial and Institutional (IC&I) sector indicated:

- Commercial waste cardboard contamination is high due to the lack of onsite program management for this material type.
- Multi-residential waste is primarily garbage and film plastic.
- Industrial sector waste generally consists of unique waste materials which are often hard to recycle in small quantities.

A review of IC&I reduction/diversion programs offered by surrounding municipalities indicates others jurisdictions have:

- Offered blue box collection service to IC&I businesses where the requirements of the curbside collection program can be met;
- Increased landfill site tipping fees; and,
- Implemented construction and demolition (C&D) recycling.

The County currently has programs in place for the first and third initiatives.

Participants reviewed MOE's proposed Waste Reduction Act (developed to replace the Waste Diversion Act), the proposed Waste Reduction Strategy, and the potential impact these two documents may have on municipal waste management initiatives. Workshop participants were encouraged by the Province's views on IC&I diversion opportunities, however, given that implementation of any program is 3-5 years away, workshop discussion focused on what the County could do now to encourage increased diversion among this sector.

Participant discussion focused on a desire to explore options to enhance the current cardboard collection program, to increase the price differential between C&D and garbage disposal tipping fees and to work with other landfills to collect similar, hard to recycle industrial waste materials, for diversion.

## Bag Tag Fees

In 2009, County Council directed staff to develop a Waste Management Financial Sustainability Plan that would explore bag tag pricing options.

In 2010 Council directed staff to increase the price of bag tags from \$1.25 to \$1.50 per tag and to further study sustainability options.

In 2012, County staff conducted an informal survey of municipalities with bag tag programs and found that while user pay implementation varied among municipalities (full and partial), bag tag pricing ranged from \$1 to \$3 for each bag.

Under current status quo conditions, bag tag fees would have to increase to a minimum of \$2.19/tag to remove 100% of the costs associated with curbside garbage collection, disposal and large article collection from the levy.

Participants asked for a phased in bag tag pricing structure, for consideration by Council in November 2013, that would retain the Waste Management impact on the tax levy at the current \$2.79 million per year, only increasing by inflation each year thereafter.

The participants requested exploration of additional ways to decrease the overall program costs of the curbside collection program by exploring:

- collection contract pricing options (i.e.: cost/tonne vs. cost/stop);
- bi-weekly collection (offset with drop off depots); and,
- larger blue boxes (ability to increase curbside capture rate)

## Program Performance Metrics

The County currently does not have an established diversion target or set program metrics by which to easily communicate program performance to the public.

Participants asked staff to develop three metrics (efficiency, effectiveness and community impact) that easily convey information to the public and guide education.

## Public Engagement Options

To date, public engagement under the IWMP has consisted of:

- Two electronic surveys: one at the start of the project and a second this September, (Speak Up Oxford – Let's talk trash). Both surveys received more than 700 responses;
- Two stakeholder committee meetings containing representation from all area municipalities as well as the industrial, commercial and agricultural sectors; and,
- One telephone survey conducted in August.

Participants concluded one more meeting of the Steering Committee and one online town hall survey through Speak Up Oxford - Let's talk trash to seek input on the draft Integrated Waste Management Plan occur early 2014.

## Comments

### Draft Waste Management Strategy

A draft Oxford County Waste Management Strategy will be completed in consideration of all of the input received to date, including:

- Comments received on the Genivar IWMP Interim Report (December 2012) which was first presented to Council during the February 27, 2013 meeting, Report PW2013-11;
- Survey results received from two online surveys and one telephone survey;
- Two Steering Committee Meetings;
- Two Facilitated Council Workshops;
- Recommendations approved by Council at the June 26, 2013 meeting, Report 2013-39;
- Resolution No.12 from the October 23, 2013 Council meeting whereby staff will consider the extent to which the County can manage residential and IC&I waste generated in the County; and,

The draft Strategy will be presented to Council in early 2014 for public consultation. Public consultation will be through an extension of our earlier "Let's Talk Trash" campaign and focus public comment through our online town hall Speak Up, Oxford. The draft Strategy will include more public consultation details. It is anticipated that the final Strategy will be presented for Council's approval in Spring 2014.

### 2014 - 2016 Bag Tag Fee Proposal

Within the 2014 Business Plan and Budget, staff are proposing a bag tag fee structure which incrementally increases from the existing \$1.50/tag as follows:

- July 1, 2014 increase to \$1.75/tag (\$0.25/tag increase)
- January 1, 2015 increase to \$1.85/tag (\$0.10/tag increase)
- January 1, 2016 increase to \$2.00/tag (\$0.15/tag increase)

The proposed pricing structure is designed to stabilize the tax levy impact of the waste management programs to inflationary increases by 2018. A detailed report on the proposed structure including risks and implications will be presented to Council for consideration as part of the 2014 Business Plan and Budget process.

### Oxford Community Sustainability Plan

Further to the development of the Waste Management Strategy as discussed in this report, the development of a broader Oxford Community Sustainability Plan may be appropriate. Within a Community Sustainability Plan a financial, social and environmental decision framework can be developed along with a strategy to achieve broader community sustainability. This broader sustainability plan would, in part, assess the ability of the County of Oxford to manage all solid waste generated within Oxford County boundaries (including residential, industrial, commercial and institutional) and develop a long-term plan to achieve sustainability. It is proposed that this initiative be considered by Council within the 2014 Business Plan and Budget process.

## Conclusions

This report sets the direction of the draft Waste Management Strategy to be presented to Council by February 2014. Following public consultation, it is expected that the final Strategy report will be presented to Council for approval in Spring 2014. Upon adoption of the Strategy, staff will begin implementation and prepare for the procurement of upcoming waste collection and process contracts set to expire on April 30, 2015.

## SIGNATURE

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### Report Author:

Original signed by

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Pamela Antonio  
Waste Management Coordinator

### Departmental Approval:

Original signed by

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Robert Walton, P.Eng.  
Director of Public Works

### Approved for submission:

Original signed by

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Peter M. Crockett, P.Eng.  
Chief Administrative Officer

## ATTACHMENT

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Attachment 1 IWMP Workshop Presentation, September 11, 2013

## Integrated Waste Management Plan

### County Council Facilitated Workshop

September 11, 2013



## Purpose of Workshop

- A continuation of the April 10<sup>th</sup> workshop which covered:
  - Overview of the Draft IWMP Interim Report
  - Facilitated discussion on Source Separated Organics and Curbside Collection and Processing Contracts
- Today, through a facilitated discussion, obtain Council perspective on:
  - IC&I Reduction/Diversion Opportunities
  - Waste Management Sustainability Plan
  - Program Metrics
  - Public Engagement Options
- Report to Council on these discussions in October



## Workshop Agenda and Format

- Review Project Time Line
- Review June 26<sup>th</sup> IWMP Council Report Recommendations
- Facilitated Discussion of Workshop Topics
  - IC&I Reduction/Diversion Opportunities
  - Waste Management Sustainability Plan
  - Program Metrics
  - Public Engagement Options
- Next Steps



## Project Time Line

Oxford County Integrated Waste Management Plan Critical Path													
Task	Feb-12	Mar-12	Jun-12	Jan-13	Feb-13	Apr-13	Jun-13	Aug-13	Sep-13	Oct-13	Jan-14	Apr-14	
Start of Project	█												
Electronic Survey	█	█											
1st Steering Committee Meeting		█											
2nd Steering Committee Meeting			█										
Draft IWMP Interim Report				█									
Report to Council - Draft IWMP Interim Report					█								
Councillor Workshop						█							
Report to Council - Workshop Recommendations							█						
Extend Curbside Collection and Processing Contracts								█					
Community Engagement - Telephone Survey									█				
Councillor Workshop										█			
Municipal Meetings											█		
Public Consultation												█	
3rd Steering Committee Meeting													█
Report to Council - Workshop Recommendations													
Final IWMP Report to Council													
Release Processing and Collection RFP's													





## June 26<sup>th</sup> IWMP Council Report Recommendations

Recommendations	Result
Curbside Organics Collection	✗
Re-launch backyard composting program	✓
Extend Curbside Collection and Recycling Processing Contracts	✓
Approve Communication and Engagement Plan	✓

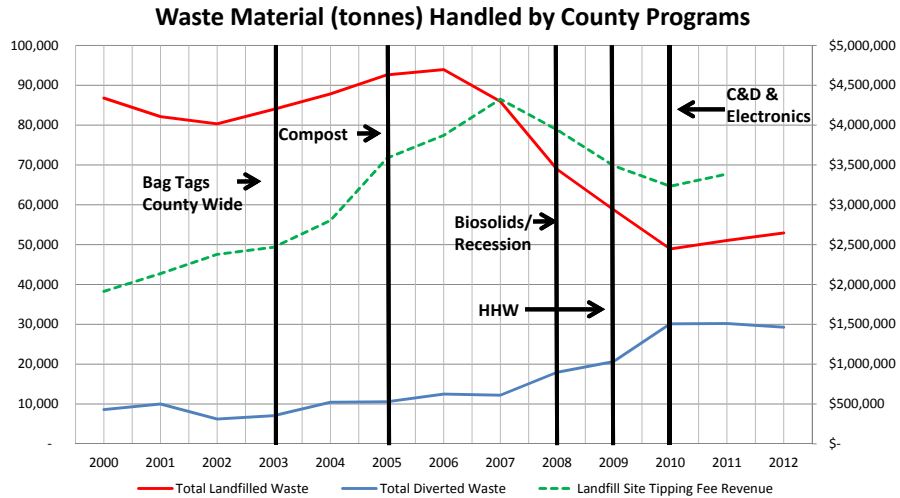


## Workshop Items for Discussion

- **IC&I Reduction/Diversion Opportunities**
- **Waste Management Sustainability Plan**
- **Program Metrics**
- **Public Engagement Options**



## IC&I Reduction/Diversion Opportunities



## IC&I Reduction/Diversion Opportunities

### Commercial Business

- High cardboard contamination
- Lack of onsite management of cardboard
- Some cardboard not suitable for recycling



## IC&I Reduction/Diversion Opportunities

### Commercial Business

- Primarily garbage
- Some film plastic contamination



## IC&I Reduction/Diversion Opportunities

### Industrial

- Unique waste material not easily recycled



## IC&I Reduction/Diversion Opportunities

### What's the government doing?

- IC&I reduction/diversion regulated by the province
  - Ontario Regulation 103/94 prescribes that industrial, commercial and institutional implement source separation programs
- MOE recently developed a Waste Reduction Framework for Ontario, consisting of:
  - Proposed Waste Reduction Act
  - Proposed Waste Reduction Strategy



## The Proposed Waste Reduction Act (WRA)

- WRA will replace the current Waste Diversion Act, making individual producers accountable for proper end-of-life management of their products
- Producers responsible for meeting:
  - Waste reduction standards
  - Service standards for consumer accessibility and convenience
  - Promotion and education requirements
- Municipalities may register to receive compensation for the collection of any designated waste
  - Reimbursement to include costs for collecting, handling, transporting and storage of waste as well as processing and disposal of designated waste
  - Municipalities will have to enter into agreements with the producer(s)

## The Proposed Waste Reduction Strategy

- Waste Reduction Strategy will provide a blue print for increasing diversion
  - Outlines vision to move towards zero waste and fostering economic and environmental innovation
  - Sets desired results, steps and a timeline for an orderly and smooth transition of existing diversion programs
- Impact on municipal waste management programs:
  - Possible increase in blue box funding (greater than 50%)
  - Increase administrative responsibilities pertaining to reporting and program management
  - Current programs will change, with future program scope and delivery dictated by the producer

## Proposed Time Frames

Action Item	Short Term (1-2 yrs)	Medium Term (2-4 yrs)	Long Term (4 yrs & Beyond)
Blue Box	<ul style="list-style-type: none"> <li>• Consult on funding model and roles and responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>• Continued consultation</li> <li>• First steps to increase funding and responsibility; begin transition</li> </ul>	<ul style="list-style-type: none"> <li>• Continue transition of program</li> </ul>
Transition <u>other</u> existing programs	<ul style="list-style-type: none"> <li>• Consult and complete transition of WEEE</li> <li>• Begin transition of MHSW</li> </ul>	<ul style="list-style-type: none"> <li>• Complete MHSW transition; begin transition of Used Tires</li> </ul>	<ul style="list-style-type: none"> <li>• Complete transition of Used Tires</li> </ul>
Designate IC&I paper and packaging	<ul style="list-style-type: none"> <li>• Consult on designating IC&amp;I paper &amp; packaging</li> <li>• Begin review of 3Rs Regs</li> </ul>	<ul style="list-style-type: none"> <li>• Designate a subset of IC&amp;I paper &amp; packaging under proposed Act</li> </ul>	<ul style="list-style-type: none"> <li>• Continue phase-in of additional IC&amp;I paper &amp; packaging wastes</li> </ul>
Develop new standards for ELVs	<ul style="list-style-type: none"> <li>• Consult on and implement new recycling standards</li> </ul>	<ul style="list-style-type: none"> <li>• Continued implementation of standards and consult on additional measures</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to consult on additional measures</li> </ul>
Designate additional wastes	<ul style="list-style-type: none"> <li>• Consult on additional wastes that could be designated</li> </ul>	<ul style="list-style-type: none"> <li>• Designate new wastes, possibly carpets and <u>additional WEEE products</u></li> </ul>	<ul style="list-style-type: none"> <li>• Continue to designate new wastes, possibly non-food organics and bulky items</li> </ul>
Disposal bans	<ul style="list-style-type: none"> <li>• Consult on use of disposal bans, including eligible waste and timing</li> </ul>	<ul style="list-style-type: none"> <li>• Ban WEEE from disposal once transition is complete</li> </ul>	<ul style="list-style-type: none"> <li>• Ban MHSW from disposal once transition is complete</li> </ul>
Increase diversion of organics			<ul style="list-style-type: none"> <li>• Consult on a strategy for organics diversion</li> </ul>

## IC&I Reduction/Diversion Opportunities

### What are other municipalities doing?

Action	Impact
Offer blue box collection services to ICI who can meet curbside requirements	Collected material not eligible for funding by WDO; Extends collection routes; Large volumes can fill truck quickly; Increased material revenue; Less recycled material going to landfill
Increase landfill site tipping fees	Forces ICI to reduce; ICI will find an alternative landfill to send waste to; potential for decreased tipping fees which will impact landfill site revenue
Construction and Demolition Recycling	Relatively new diversion program quickly being implemented across Ontario municipalities

## IC&I Reduction/Diversion Discussion Items

- To what extent should the County be involved in advocating/driving waste reduction/ diversion activities among the IC&I sector?
- What might be some of the obstacles that would need to be overcome if the County became more involved in waste reduction/diversion activities for this sector?
- What opportunities other than landfill bans and increased landfill site tipping fees might be there to encourage IC&I reduction/diversion activities?
- What are your conclusions regarding IC&I reduction/diversion opportunities in Oxford County?

## Waste Management Sustainability Plan

- In 2009 County Council directed staff to develop a sustainability plan for Waste Management
- Opinions varied as to whether bag tag revenue should cover all or a portion of curbside garbage collection and disposal costs
- Council directed Staff to increase the price of bag tags from \$1.25 to \$1.50 in 2010 and to further study sustainability options



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## Waste Management Sustainability Plan

### Municipal Bag Tag Pricing Comparison

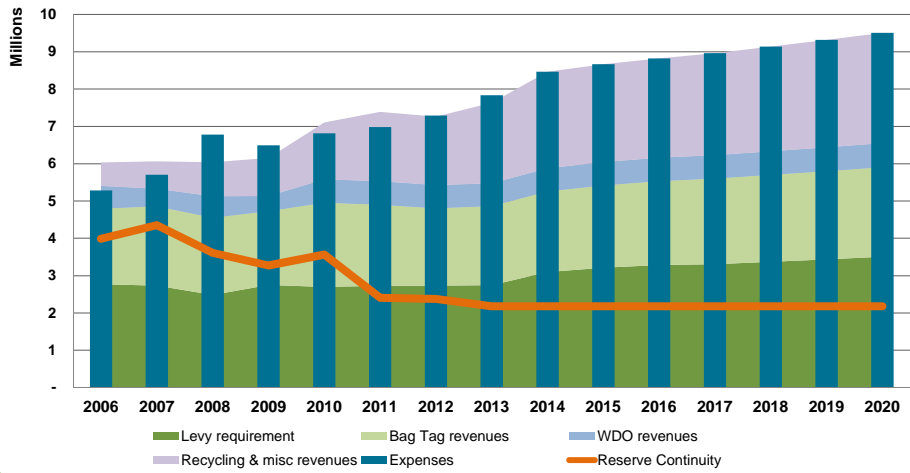
Municipality	Bag Tag Price	Large Article Tag Price
County of Wellington	\$1 - \$1.75	N/A – taken to landfill site for disposal, subject to tipping fees
Oxford County	\$1.50	N/A – free annual curbside collection
City of Kingston	\$2.00	N/A – taken to landfill site for disposal, subject to tipping fees
Kawartha Lakes	2 free bag/week, then \$2.00/bag	\$5.00/item
Blue Water Recycling Association	\$2.50/bag - varies depending on municipality	N/A – taken to landfill site for disposal, subject to tipping fees
City of Stratford*	\$2.40	\$10.00
County of Simcoe*	1 <sup>st</sup> bag \$2.00, subsequent bags-\$3.00	N/A – taken to landfill site for disposal, subject to tipping fees



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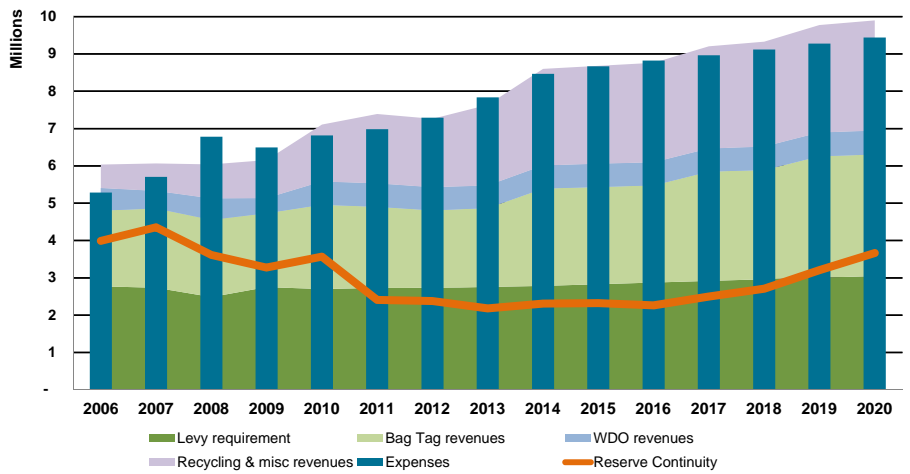
## Waste Management Sustainability Plan

Scenario A - Status Quo



## Waste Management Sustainability Plan

Scenario B





## Waste Management Sustainability Plan

- The 2013 Waste Management levy requirement is \$2.7 million of which \$675,457 comes from commercial, industrial, and large industrial properties
- Full User Pay System for Curbside Collection and Disposal with current bag tag sales may look as follows:
  - \$2.19/ bag tag – to remove curbside garbage collection, disposal, large article and administration share
  - \$2.97/bag tag = to cover 100% of curbside garbage collection, disposal, large article, recycling and admin shares
  - \$3.81/bag tag – to remove 100% of waste management costs from the tax base (all other things being equal)

**Note: Based on 2012 Unaudited Actual**



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## Waste Management Sustainability Plan Discussion Items

- What would the implications be of removing Waste Management costs from the tax base?
- What benefits do you see to removing Waste Management costs from the tax base?
- What obstacles would need to be overcome to achieve this if it were to be implemented?
- What might some of the solutions to the identified obstacles be?
- If Waste Management costs remain on the tax base should there be changes to the current user pay system or implementation of additional user pay systems to ease the burden on the tax base?
- What are your conclusion regarding the Waste Management Sustainability Plan?



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## Program Performance Metrics

### Need?

- WDO Best Practice to monitor and measure program performance and report annually to Council
- Identifies program successes and opportunities for improvement

### Measurement?

- What is the best way to measure Oxford's performance?
  - Efficiency (i.e. \$/tonne, \$/hhld, etc.)
  - Effectiveness (i.e. diversion rate, kg/hhld/capita, etc.)
  - Community Impact (i.e. landfill life, participation levels, etc.)



## Program Performance Metrics Discussion Items

- What benefit do you see in implementing program performance metrics?
- What obstacles do you see in identifying/implementing program performance metrics?
- What is the best, most meaningful way to measure waste management performance in the County?
- What are your conclusions regarding program performance metrics?

## Public Engagement

- Public engagement under the IWMP consisted of
  - 1 electronic survey (over 700 responses)
  - 2 stakeholder committee meetings
- February 27<sup>th</sup>, Council asked for more meaningful public engagement
- June 26<sup>th</sup>, Council approved Communication and Engagement Strategy for the IWMP



## Communication and Engagement Strategy

Strategic Direction	Program Objective	Comm/Engage Goal
<p><b>3. iii. A County that Thinks Ahead and Wisely Shapes the Future</b> – Apply social, financial and environmental sustainability lenses to significant decisions by assessing options in regards to responsible environmental stewardship</p>	<ul style="list-style-type: none"> <li>To increase the County’s annual Waste Diversion Ontario Funding, which is regarded as a “best practice”</li> </ul>	<p>To use the IWMP consultation process to:</p> <ul style="list-style-type: none"> <li>Increase awareness of the importance of waste diversion</li> <li>Support this goal by informing residents about the correct use of blue boxes</li> </ul>
<p><b>4. ii. A County that Informs and Engages</b> – Better harness the power of the community through conversation and dialogue by enhancing opportunities for public participation under meaningful voice on civic affairs</p>	<ul style="list-style-type: none"> <li>To understand citizen level of awareness of services</li> <li>To understand which methods are most effective for each residents</li> <li>To understand public opinion on key issues, such as structure of bag tag fees</li> </ul>	<p>To use the IWMP consultation process by reliably gauge:</p> <ul style="list-style-type: none"> <li>The baseline understanding of residents re: services</li> <li>Preferences for both one-way and two-way communication on waste management issues</li> </ul>
<p><b>5. ii. A County that Performs and Delivers Results</b> – Deliver exceptional services by conducting regular service reviews to ensure delivery effectiveness and efficiency</p>	<ul style="list-style-type: none"> <li>To revise the County’s current system to more efficiently meet present day needs and, similar to an Official Plan or Strategic Plan, provide a road map/vision for future waste management planning</li> </ul>	<p>To support the development of materials that suitably inform decision-makers and other key stakeholders, e.g., Council, staff in partner municipalities, ICI customers etc.</p>

## Strategy

Objective	Goal	Outcome
Informing	<ul style="list-style-type: none"> <li>• Raise awareness of waste management issues</li> <li>• Help residents understand cost and implications of programs and service delivery</li> </ul>	<ul style="list-style-type: none"> <li>• To improve blue box sorting as a means of improving waste diversion</li> </ul>
Consulting	<ul style="list-style-type: none"> <li>• Attain feedback through consultation that provides the County with a level of certainty regarding the priorities and preferences of its citizens</li> </ul>	<ul style="list-style-type: none"> <li>• Seek public opinion about the structure of bag tag fees</li> </ul>

## Engagement Opportunities Still to Come



### Plus....

- Steering Committee Consultation
- Public Open House

## Public Engagement Options Discussion Items

- What additional engagement opportunities should the County explore and when should the engagement take place?
- What potential impact will public engagement have on contract timing?
- What issues should be addressed through public consultation?
- What additional forms of public consultation should be considered? Social media, focus groups, surveys, etc.
- Should additional public consultation be done by a third party market research company? Budget?



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## Next Steps

- Review workshop comments and input
- Prepare staff report with recommendations
- Further dialogue with Steering Committee
- Council consideration of staff report



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**APPENDIX E – 2014 Speak Up Oxford Public Engagement Process –  
Comments**



## Speak Up Oxford Public Engagement Process – Comments 2014

Comment Number	Subject	Improvement Option	WMS Opinion	Comments
1	Collection frequency	6 Day Collection Cycle	Oppose	Keep the garbage on the 5 day schedule.
	Collection frequency	6 Day Collection Cycle	Favour	Increase recycling to every week. Recyclables are getting thrown in the trash because people don't have the room to store all of the recyclables for two weeks.
	Curbside compost collection	Re-launch Backyard Composting	Oppose	Implement a wet waste/compost system like other municipalities. Friends of our from out of town can't believe that we have to pay for tags for garbage and that our recycling is every other week. They have a compost program where there wet garbage is separated and also collected.
	Get rid of LAC	User-Pay System for LAC	Favour	Get rid of large item collection. This is a waste of money. Implement a dump like Tillsonburg has in the rest of the County. We greatly prefer having the Tillsonburg dump than large item collection. It detracts from the beauty of the community, people don't follow the rules and it creates an opportunity for looting/picking.
2	Concerned with odour and/or illegal dumping	6 Day Collection Cycle	Oppose	I would prefer things remained unchanged with garbage and blue box pickup. Summer garbage odor would be horrific and could lead to more dumping than already is. Living on a side road this happens and I don't want more added to the road sides.
3	Cost	New Blue Box for Residents	Oppose	Regarding the recycling, and additional blue boxes. Just let folks know that they can use containers of a maximum size, send them a nice bright recycling sticker to put on it. The folks who pick up recycle already see a huge variety of containers. Once they see it is recycle, your recycle folks do the right thing and dispose of it already. Hey, you could advertise that Oxford allows re-purposing other types of containers to recycle weekly! Reduce - Reuse - Recycle - kind of fits doesn't it?

4	Curbside compost collection	Re-launch Backyard Composting	Oppose	<p>I am unable to make the Public Info Session or the online option on Wednesday (I'll be at the soccer field that night).</p> <p>My concern is the idea of re-launching the back yard composting program. I feel it would be better to think more progressively. Instead of re-launching individual composting, I'm very interested in looking at the long term benefits and costs of creating a city run composting program.</p> <p>I have been a homeowner for over 15 years. I have had composters on my property before. I am educated about how to use them and motivated to divert organic waste from landfills. The problem with backyard composters is they are not effortless to maintain. Your average busy household, I believe, even with education and motivation, will not maintain a backyard composter properly over time and therefore will not produce useful compost. Many quickly become a compact rubbish heap forgotten in the back yard.</p> <p>I would be very interested in investing my tax dollars in a municipal composting pickup program rather than backyard compost education and compost bins. I realize this would cost more and take longer to implement.</p> <p>I would like to be part of a progressive community that sees the value in encouraging composting in a way that is sustainable. I divert 6 blue bins of recyclables from my garbage every 2 weeks because it is easy to separate them and put them at the curb. I would compost regularly if it was that easy. And I wouldn't mind paying for it on my taxes.</p> <p>I have never participated in this kind of forum before. Please let me know if the information I've provided is the appropriate kind of feedback for this, or if my concern should be shared in a different way.</p>
5	Oxford County recycling facility	Identify Local Transfer Station Options	Neutral	<p>Waste Management Proposal - Have you considered establishing our own Oxford County recycling facility, rather than transporting it all to Brantford? Also, I don't recall reading about how much money the county receives for our recycling material. I'm curious to know more about this. Would you mind directing me to this information please?</p>



6	Oxford County vs. another municipality	General	Neutral	Why is it that Tillsonburg just has to go along with what ever is decided in Woodstock. We do not have Spring and fall pickup like the rest of Oxford.
7	Concerned with odour and/or illegal dumping	User-Pay System for LAC	Oppose	I am concerned about the fee for large article collection. We live on a rural road, and each year large articles and other household waste are dumped on our road. If there are more fees, there will be more dumping which the township will have to clean up.
8	Employee changes	General	Oppose	If the County wants to improve re-cycling and save money in the process; 1st fire the person(s) who came up with the lame brained suggestions.
	Cost	Bag Tag Pricing Sustainability Program	Favour	2nd increase the bag tag rate to what it costs to handle and dispose of that bag.
	Cost	User-Pay System for LAC	Favour	plus enough to cover the cost of large item collection. Build into the process automatic increases so that the politicians and the bureaucrats never have to deal with it again. This will automatically increase re-cycling.
	Curbside compost collection	Re-launch Backyard Composting	Oppose	To further decrease the volume going to landfill, put in place a full and compete green bin program.
9	Confusion/Education	6 Day Collection Cycle	Oppose	The 6 days rotation would cause confusion for most of the communities that have regulated their routine to accommodate the garage pick up dates.
10	Cost	Bag Tag Pricing Sustainability Program	Neutral	Based on comments made at tonight's discussion, there needs to be more explanation as to HOW you arrive at the fee. Time was it was considered a "tax grab". But bag tags mean your garbage cost is not based on the assessed value of your home. Based on my home, the latter would be the equivalent of about six bags when I only put out one. One thing not talked about is the price tag for recycling, the difference between cost and revenue. I know there was a report years ago that put the cost to the average home of about \$60 something that on the tax bill. What's it today?

11		General	Neutral	As per councillor Lupton in council chambers, broken open waste checks reveal still an average of 66% non compliance with recycling in the county. Thus proving an incentive to reach the next level is needed. Suggestion of a clear bag equal in size to 33% of one bag to be issued and picked up free of charge, hence the incentive. The second regular bag supplied by the taxpayer with a bag tag equaling an all in full cost of the program described as approx. 4.50/bag. This has the possibility of reducing overall household waste by 50%, extending landfill life, and saving tipping fees, trucking, and wages.
	Confusion/Ed ucation	User-Pay System for LAC	Neutral	2) Big garbage at curbside is a very effective form of recycling as almost 50% of everything placed at roadside is picked up for re-use somewhere. However this curbside action is being abused. The very clear rules of what is big garbage for this event are muddled by each municipality just picking up the remains rather than enforcing the big garbage rules. This undermines the ability of outside contractors to bid on the process. Also this undermines the ability of outside bidding contractors to plan or operate waste diversion or reduction centers. This affects me directly.
	Confusion/Ed ucation	General	Neutral	3) Confusion over exact plastics recycling, what is acceptable in some areas over others, and having to study to find out if the plastic is recyclable detracts the citizens from actually recycling to the max. It also is anti productive to those willing to take apart items as id is not on individual parts i.e. broken vacuum cleaners or air hockey games etc., etc.
	Collection frequency	6 Day Collection Cycle	Favour	4) Additional recycling pick up is needed
	Curbside compost collection	Re-launch Backyard Composting	Oppose	Compost bins supported but not the only program and a pickup or drop off locations for compost.
12	Cost	General	Oppose	I was disturbed to read of the changes to the County's waste management strategy proposed by Waste Management Controller Pamela Antonio.  While it is part of an administrator's function to seek out cost savings, surely QUALITY OF SERVICE to the people served by the County remains of paramount importance?

				By no stretch of the imagination can the proposed changes be described as improved SERVICE to residents. In fact, the current level of service will not be maintained.
	Cost	User-Pay System for LAC	Oppose	Of further concern is the proposal to discontinue the pickup of large waste items, and force residents to carry such items to the landfill site themselves. What a wonderful service improvement that will be!! The point I am making is that some services should be maintained for the comfort and well-being of residents despite increasing costs. Seek improvements certainly, but not to the detriment of the people councillors were elected to serve.
	Cost	Bag Tag Pricing Sustainability Program	Oppose	The increases in costs to residents for waste disposal (including that slated for this year) have risen at a far greater rate than the Cost of Living Index over the same period, and need to be justified to residents. May I urge your influence and support in rejecting this ill-advised proposal.
13	Confusion/Education	6 Day Collection Cycle	Oppose	1 - I think a 6-day cycle is much too difficult for people to stay on top of. It will cost you more to remind people when their pick-up is than to have a simple, easy-to-remember, i.e. consistent schedule. There are still ways to make that cheaper. I believe the key is the recycling/composting side of the ledger. If people do that wisely, they don't have much garbage. In a house of 2, I only put a bag out typically every other pick-up, frequently every third pick-up. Often the reason I do that is so the smell doesn't begin to overwhelm, not because the bag is full. I think you could do an alternate week pick-up as a regular schedule. Possibly, in June to September, you might need weekly because of the heat affect. I think that's an easy adjustment.
	Increase recyclable materials	New Blue Box for Residents	Oppose	2 - People can get all the blue boxes they want without it coming off everyone's taxes. Many people already have more than one. That's not the problem. I think Oxford needs to let us re-cycle many more items (i.e. all plastics, plastic bags of all types, Styrofoam, restaurant take-home containers, etc. so that virtually everything can be dropped in the blue box. If people are made to look up whether this goes in or not, they throw it in the garbage. Have an exciting educational blitz with a more complete recycling program

				so we can all be proud, and we'll fill lots of blue boxes and keep more out of the landfill.
	Cost	User-Pay System for LAC	Oppose	<p>3 - Absolutely do not end or switch to user pay for the large article pick up. Every time I put stuff out for that, 75% of it gets picked up before the community trucks arrive. It never goes to the landfill.</p> <p>I think it is one of the best examples we have of re-use/recycle. It provides side income for some. If it is too expensive for the county, look for ways to reduce the trucking costs. In my brother's community, you call the office to schedule a large-article pick-up and each household is allowed 2 free pick-ups a year. You pay if you want more. They use it for furniture, mattresses, junk, etc. I don't know what is excluded - I presume hazardous waste. You tell the office what you are including when you call in so they know how much truck space you might need. I believe they schedule multiple pick ups for each load as much as possible.</p>
	Confusion/Education	Re-launch Backyard Composting	Favour	<p>4 - I fully support the notion of composting. But, like in #2 above, why make all tax payers pay when many already have composters. You don't need anything fancy. Composting should be part of the educational blitz of #2 and that should include showing people ways of making their own simple back yard composters.</p>
	Cost	General	Neutral	<p>There are many solutions for sending less waste to the landfill, and I fully agree that that is a legitimate objective. But it doesn't have to be done on the backs of taxpayers, especially those who already comply. We don't have endlessly deep pockets and they are getting dipped into severely already by energy prices, food, etc.</p> <p>First, look within for ways to cut costs, then, do what improves efficiencies in the system. People understand the need; they need it to be simple, improved, and not to cost more. Your bag tag price jump was already at a percentage that far surpasses anyone's pay increase.</p> <p>Don't go there, or our roadsides and ditches will begin to fill again. I have already seen evidence of that.</p>

14	Confusion/Education	6 Day Collection Cycle	Oppose	<p>I would like to submit the following comments to the proposed Waste Management Plan.</p> <p>1. A six day cycle is too difficult to remember and to implement. People will forget and end up dumping garbage publically. The Annual Waste management Calendar is a very poorly done publication and leaves me wondering now what is happening. With 4 degrees and masters in reading I have the academic skills to read most complicated research documents. Yours is a difficult document to read and comprehend. Adding a six day cycle will compound that. The calendar is done as well as most instruction manuals!!! Don't complicate this with a six day cycle.</p> <p>We do not need more frequent recycling than we have now, but having lived in 5 provinces, I can tell you that your system can be enhanced. Look at the Alberta program. I did not mind bringing my recycles to a depot for the fees they paid us which is a lot more efficient and cost effective system than we have with weekly cost that never go down. Depots control what is recycled. If you don't go to that system, keep the every two week system.</p>
	Oxford County vs. another municipality	Tender Co-collection with Dual & Single Stream Recycling Options	Favour	<p>2. Parts of the country are going to a system where all recycling is collected together. This should be explored.</p>
	Increase recyclable materials	Implement Landfill Material Bans & an IC&I Waste Diversion Promotion Education Program	Favour	<p>3. The reason we have so much recycling is manufacturers packing. There needs to be a Municipal lobbying to the Federal government to force different packing strategies that will greatly reduce recycling. If we do the same thing we always did we will get what we always got. I know how hard it is to influence the Feds but a concerted effort by all Municipalities might work. At some time they have to listen to the people.</p>
	Concerned with odour and/or illegal dumping	User-Pay System for LAC	Oppose	<p>4. I believe there should be retention of the large article pick-up. I know it is a problem as we have citizens that abuse it! But the alternative will be litter across the county roads, worse than what is happening. There has to some accountability measure for abusers. All the stuff I put out got recycled by people before it was ever picked up by the</p>

				town. If you survey, I think you will find at least 50% is picked up before the pick up. Eliminating it will make matters worse for the county.
	Curbside compost collection	Re-launch Backyard Composting	Neutral	5. I support the notion of composting. It will require some education. An alternative is to have a composting pick-up like they have in St Alberta, Alberta. In 4 years it has worked very well. Thinking outside the box may bring some unique solutions. We compost because we garden. If someone doesn't, there needs to be an alternative to putting it in the garbage. The above have a compost brown box that is used to help re-compost the community.
	Oxford County vs. another municipality	General	Neutral	Please consider these comments in your assessment of the Waste Management Plan. Like I said before, my family have lived in 5 provinces and this is the first where we had to pay for pick-up of our garbage. This is another form of taxation and our taxes are already 35% higher than when we lived in Alberta and had a house that was double in value to our present house. All of Ontario needs to rethink how business and living are done. What is presently happening is not working and we have people leaving the provinces for alternatives. The province is not doing it, so our only hope is that you, the county, will. Step out of the box and look at the system from a helicopter view above and ask, "what can we do differently which will effectively meet the needs of our citizens. Good luck in that. Feel free to contact me.
15	Cost	Bag Tag Pricing Sustainability Program	Oppose	Wow you guys are CRAZY!!!! Putting the price of tags up is so ridiculous.. You know what will happen. Garbage bags littering the sides of the roads, people sneaking garbage in to local dumpsters... STUPID STUPID STUPID!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!  What other county pays for there garbage??? Brant surely doesn't, HELL Toronto doesn't even do it!!! The people who work for our county and represent the folks who live in it, need a really check...like NOW!!!!
	Cost	6 Day Collection Cycle	Favour	Another thing that is STUPID, bi-weekly recycling should be every week my friends, but you will never get that though you big fat heads!!!!

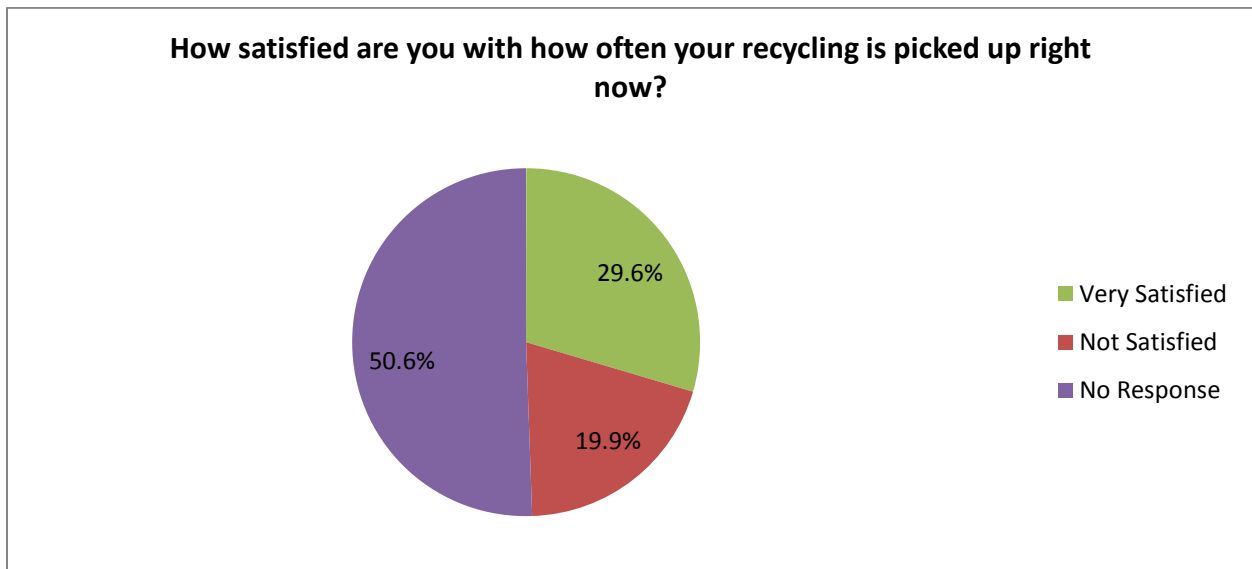
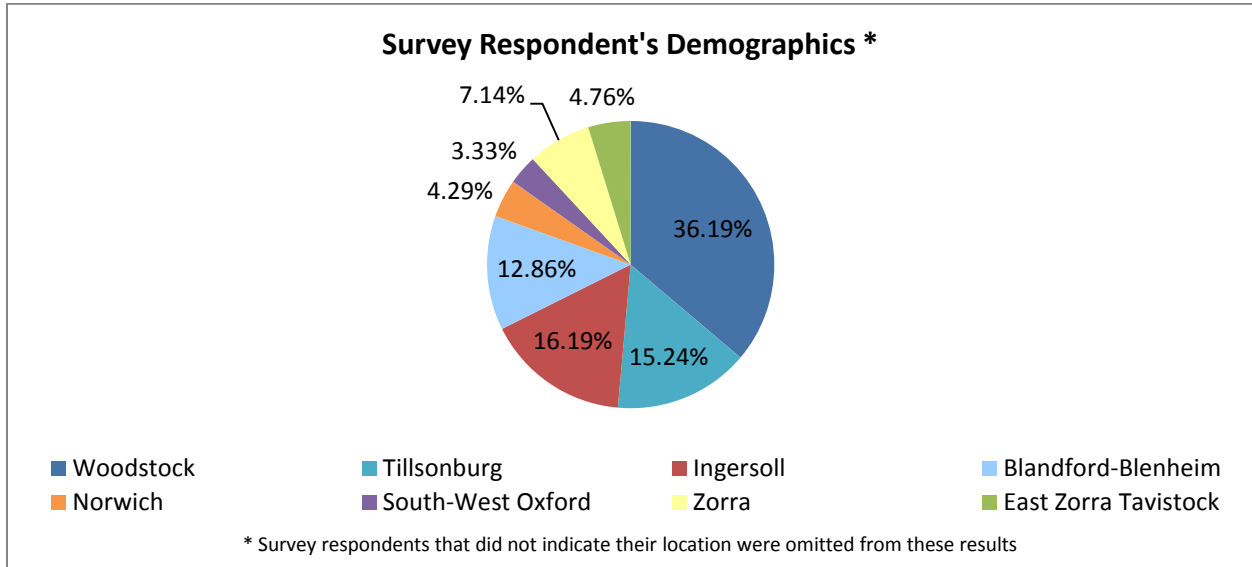
				You say its all about saving money, guess what NO it's not!!!
16	Oxford County vs. another municipality	Bag Tag Pricing Sustainability Program	Oppose	<p>REALLY - so this decreases our taxes.. then... Last I checked GTA get their Garbage picked up for free. They pay less tax on property than I do in Ingersoll... (I'm an ex - GTA resident) and now you are increasing our garbage collection costs... Its time that Oxford County/ Town of Ingersoll starting coughing up some financial reporting ... As numbers are NOT adding up here... and as Project Manager... Budgeting and Risk are one of my fortes ... Mathematically you can not tell me it costs you more money to sustain an infrastructure for 150K people when GTA has almost 7 million or more... It's bad enough we are paying for water we cannot drink that tastes horrible...and then the sewer charges are almost double... And GTA only pays about 300 per year for water and sewer disposal... You telling me you guys spend more money than GTA having to pump out of Lake Ontario...doubt that.. And here's your chance to step up to a better for years Ernie...</p>
17	Collection frequency	6 Day Collection Cycle	Favour	<p>Hi, I meant to fill out the survey regarding recycling in Woodstock but didn't have the time until today and discovered that the survey is now closed. I'd hope these comments can be added to the list. In the mid 1990's I lived in South Huron and we had weekly recycling; paying \$2 per garbage bag tag. This was a great system, and the fact that garbage bag tags now cost \$2 in Woodstock doesn't phase me one bit seeing as that's what I was use to paying 20 years ago. However when I moved back to Woodstock in 2001, I was shocked that we only had bi-weekly recycling! I've always thought this was the strange and have always wanted weekly recycling back. As a family of 4, we put out 1/2 a bag of garbage a week. But I don't waste a tag on this. I have a garbage bin beside my house and will add a second weeks 1/2 bag of garbage to the first week's therefore placing one full bag at the curb bi-weekly. What I do have lots of each week is recycling. That being said, and seeing as how I paid \$2 a bag tag in the mid 90's, based on inflation, I'd easily pay \$3+ dollars a bag tag to have weekly recycling. One of my biggest gripes about Woodstock is it's bi-weekly recycling program. Rectify this, even at an increased</p>

				<p>cost to me, and I'll be happy. If however, this isn't publicly popular due to cost, I'll fully support the next best option which would be the 6 day rotation. ANYTHING to get more frequent recycling would be of massive benefit. I feel that if Oxford County wants to increase their diversion rates then we need to stop treating recycling as a secondary system. Being bi-weekly vs. garbage's weekly cycle, make it appear like there's a greater importance to garbage then there is recycling. Making the frequency the same as garbage shows that Oxford County is serious about waste diversion. In short, I fully support weekly recycling. If that's not possible, the 6 day rotation, making recycling as frequent as garbage pick-up is my next favourite option. Thanks!</p>
18	Collection frequency	6 Day Collection Cycle	Oppose	<p>Waste Management Proposal I am NOT in favour of the proposed 6 day cycle collection. I believe it would be far too confusing - our current system is quite adequate. Ask the people of London how they enjoy their constantly changing day of garbage collection. How does one judge the number of recycling containers and bags of garbage put out over a test period of time? There are many 2 person households who regularly put out garbage and recycling, just not every week. That does not mean they do not recycle. I agree with the current system of purchasing bag tags. I believe this has reduced the number of garbage bags put out for collection. It has in our household, and we also participate in recycling and composting. You mention cost savings, however, we pay our taxes, we buy bag tags at a new \$2.00 rate - why should we now have to be hit with a constantly changing garbage/recycling pickup program? We get charged more, but as usual we get less for the ever increasing costs. Increase the cost of tags but leave things as they are. Do not change our collection schedule!</p>



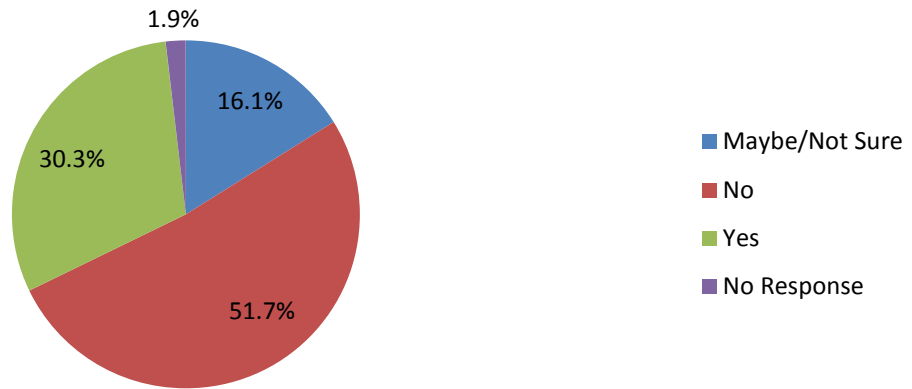
**APPENDIX F – 2014 Speak Up Oxford Public Engagement Process –  
Electronic Survey Results**

## 2014 Speak Up Oxford Public Engagement Process – Electronic Survey Results

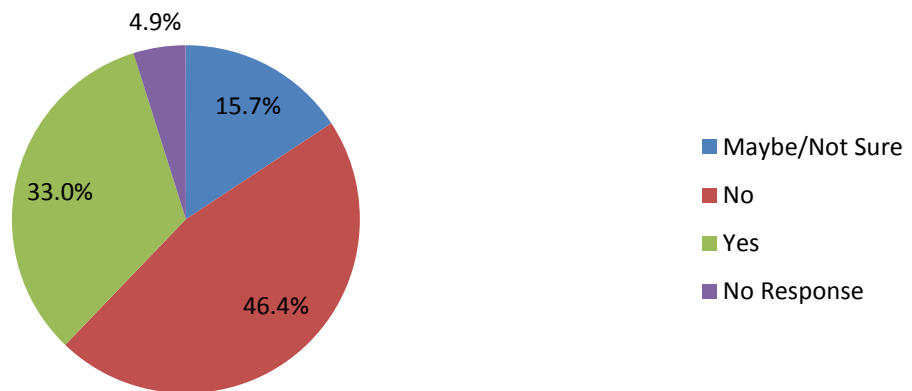


## 2014 Speak Up Oxford Public Engagement Process – Electronic Survey Results

**Right now, recycling collection is once every two weeks. Would you recycle more if your recycling was picked up every six days?**

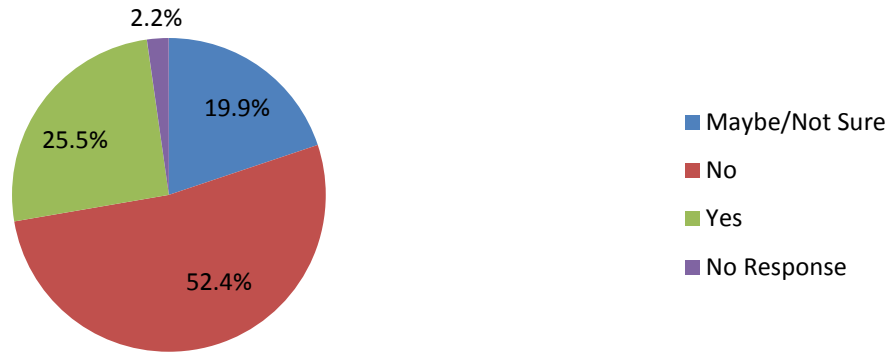


**Would you recycle more if the County supplied you with another blue box?**

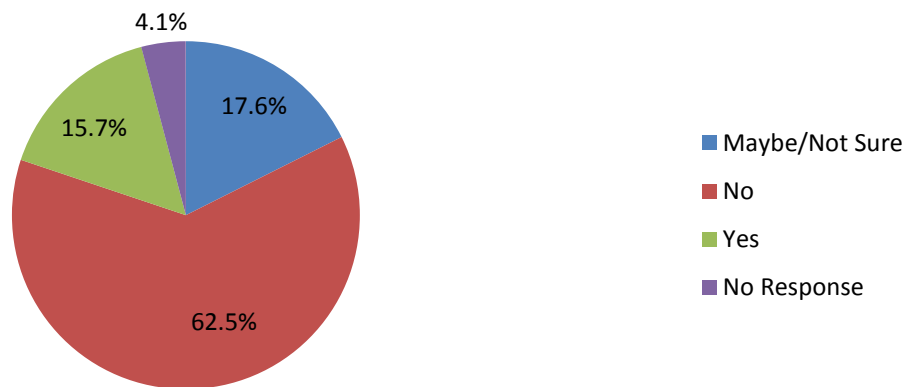


## 2014 Speak Up Oxford Public Engagement Process – Electronic Survey Results

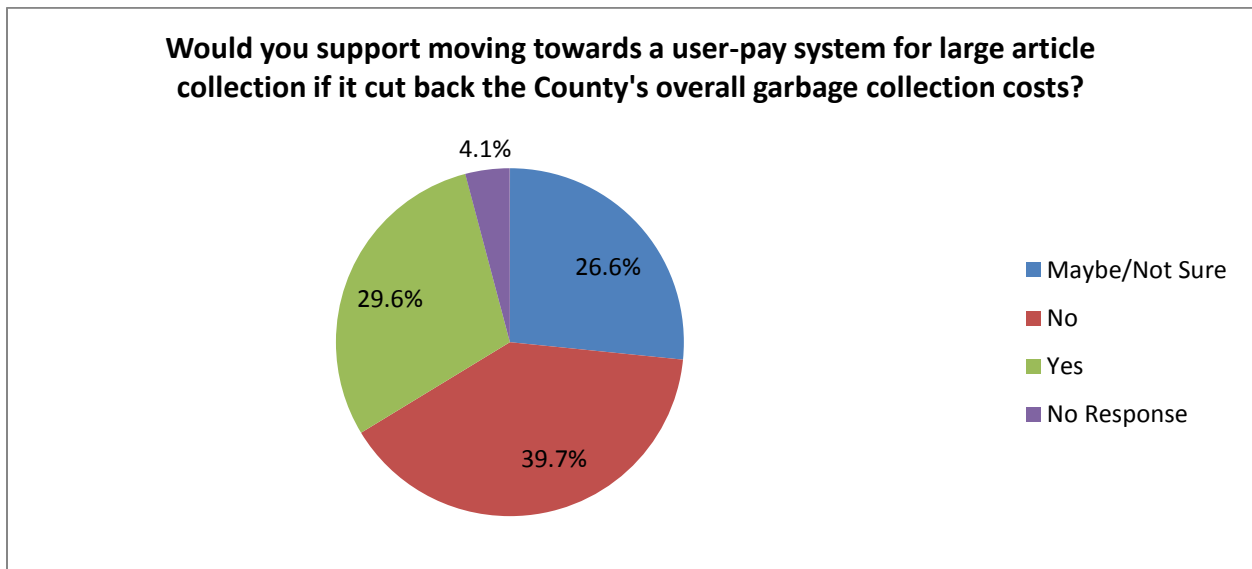
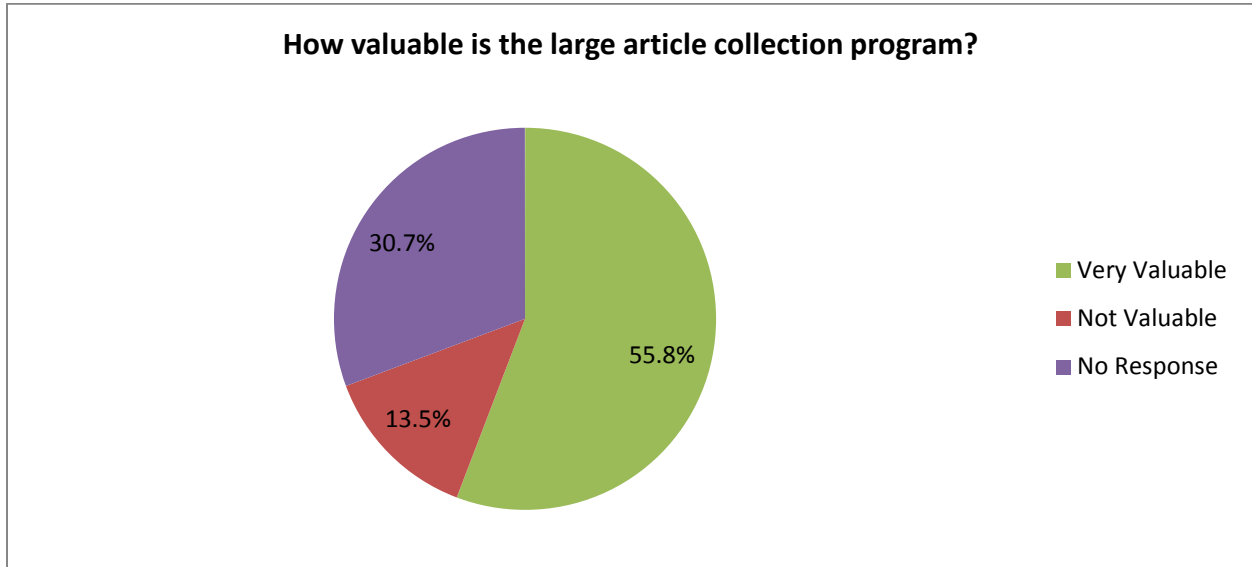
**Would you support a six (6) day collection cycle, or pick up schedule, for garbage and recycling if it cut back the County's overall garbage collection costs?**



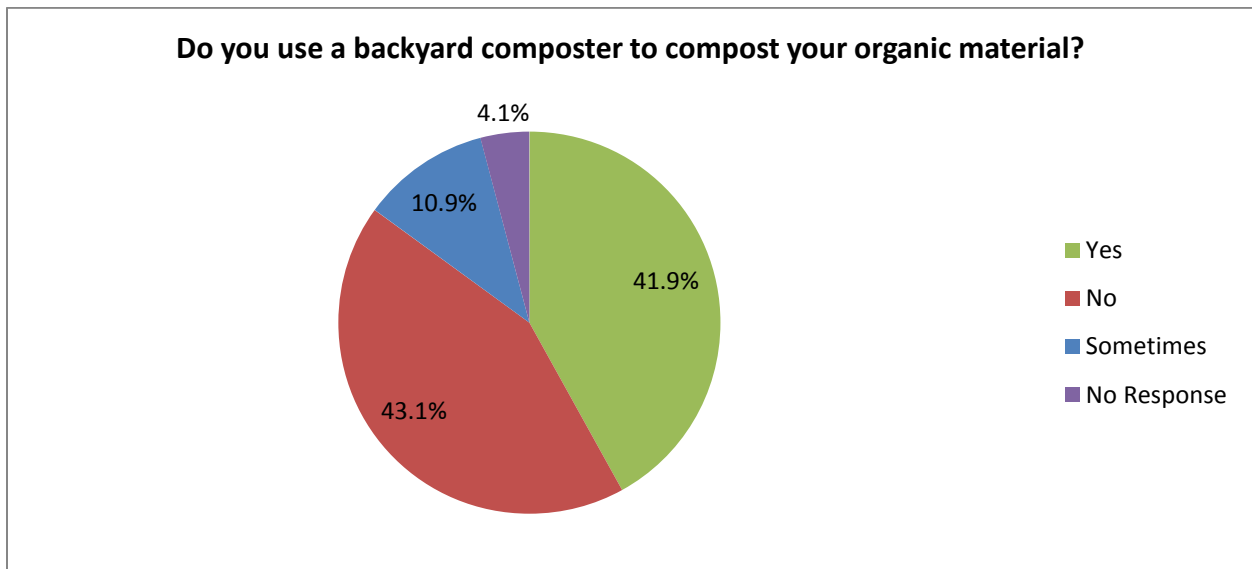
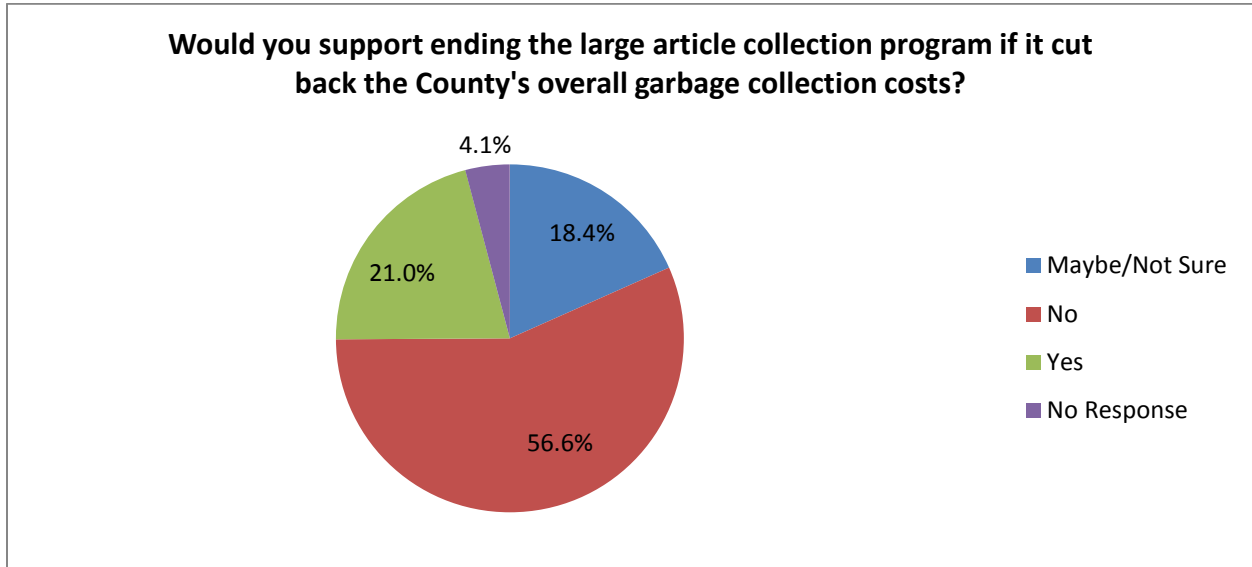
**Would you support the County supplying each household with an additional blue box for recycling at a one-time cost of \$500,000?**



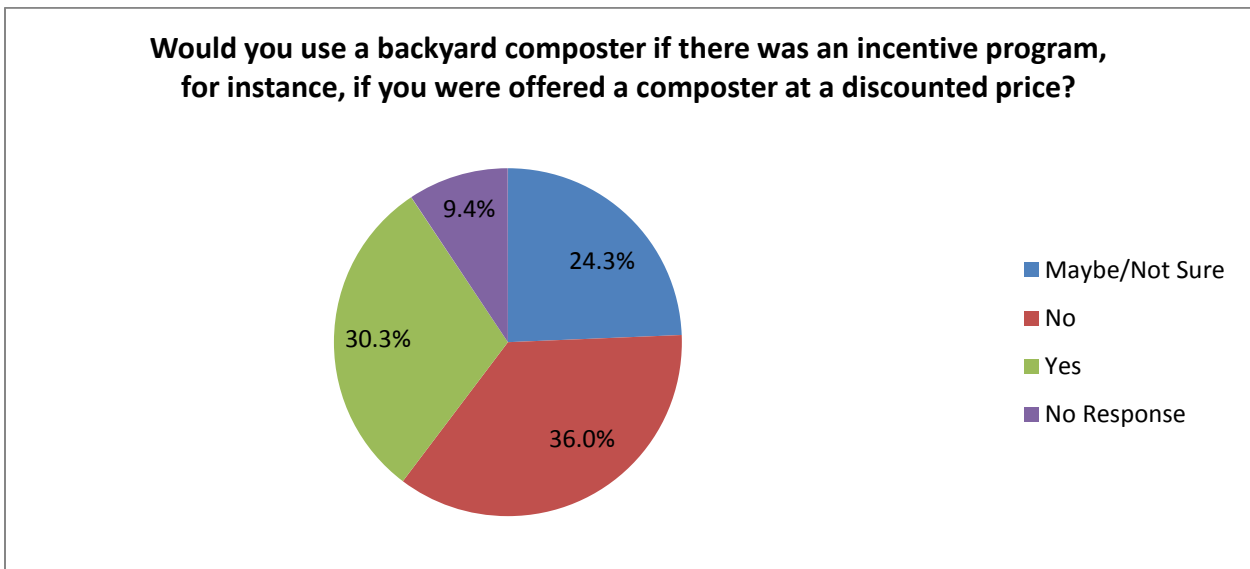
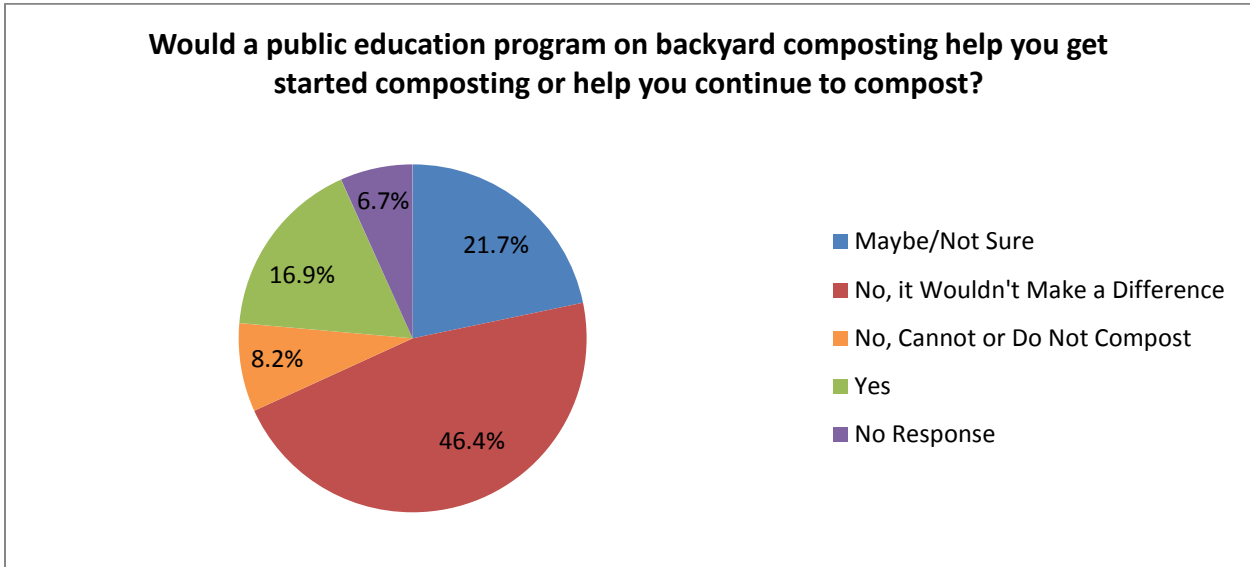
## 2014 Speak Up Oxford Public Engagement Process – Electronic Survey Results



## 2014 Speak Up Oxford Public Engagement Process – Electronic Survey Results



## 2014 Speak Up Oxford Public Engagement Process – Electronic Survey Results



**APPENDIX G – Public Meeting/Webinar Presentation**






## County of Oxford Draft Waste Management Strategy

### Let's Talk ... Trash

A road map for reducing, handling, and disposing of waste generated within the County of Oxford.




## Who Does This Affect?



**Speak Up, Oxford!**

- Anyone living in the County of Oxford, who generates garbage and recycling is affected by this Strategy
- This is a consultation process, designed to obtain input from the entire community on how to shape future programs and service delivery

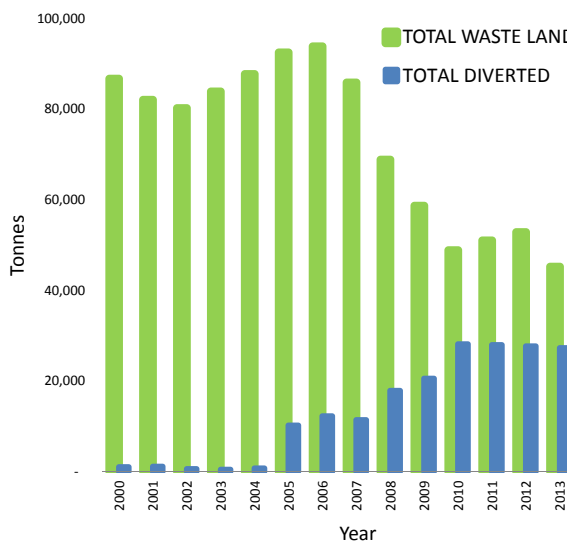


## Rationale

- Regular program and operational efficiency and effectiveness analysis is required to maintain relevant cost conscious programs
- Growth and population changes have impacted service delivery resulting in the need for program updating
- To be a sustainable community, the County must be able to handle the waste generated within its borders

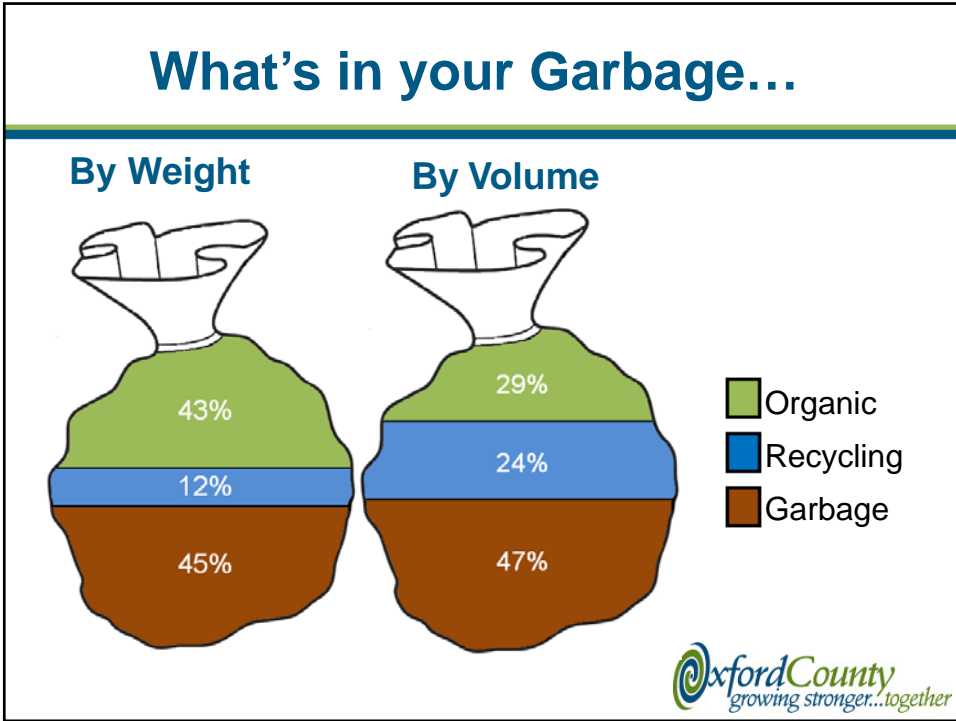


## Accomplishments



- Garbage tonnage decreased by 50,000 since 2006
- Residential Diversion Rate = 58% in 2012
- Diverted tonnage increased by 16,000 tonnes since 2007





## Current State of Affairs

**THREE** separate garbage and recycling collection programs

**THIRTY YEARS** of landfill life left

**4**

- Annual Special Event Collections
- Separate large article collection programs

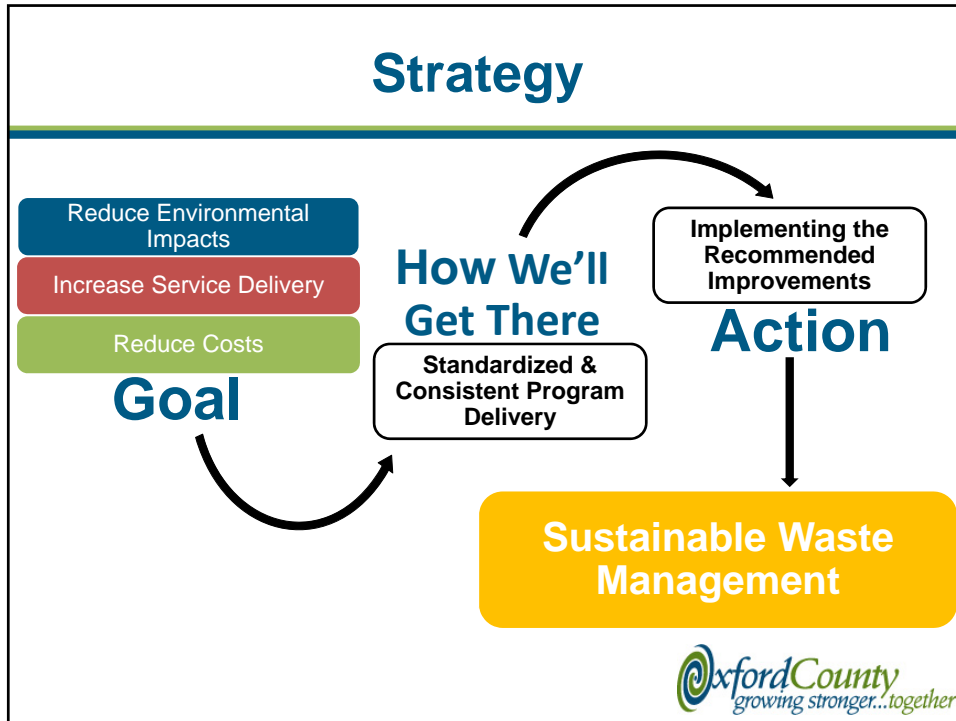
**WEEKLY** garbage collection  
**BI-WEEKLY** recycling collection

**UNBALANCED**  
collection routes

**THREE** OF HOMES DO NOT COMPLY WITH BAG TAG PRACTICES

**5%**

- Widespread use of unacceptable collection containers for both garbage and recycling
- Lack of bag tag program compliance and enforcement



## Service Improvement Options: 6 Day Collection Cycle

- Offers 10 to 15% program savings
- Enables the County to almost double the frequency of blue box collection
- Eliminates Saturday collection caused by statutory holidays
- Reduces the number of collection vehicles required
- Collection every 6 business days
- Most collections would be 10 to 11 calendar days apart over the Christmas holiday period

Reduce Environmental Impacts

- Reduces GHG emissions

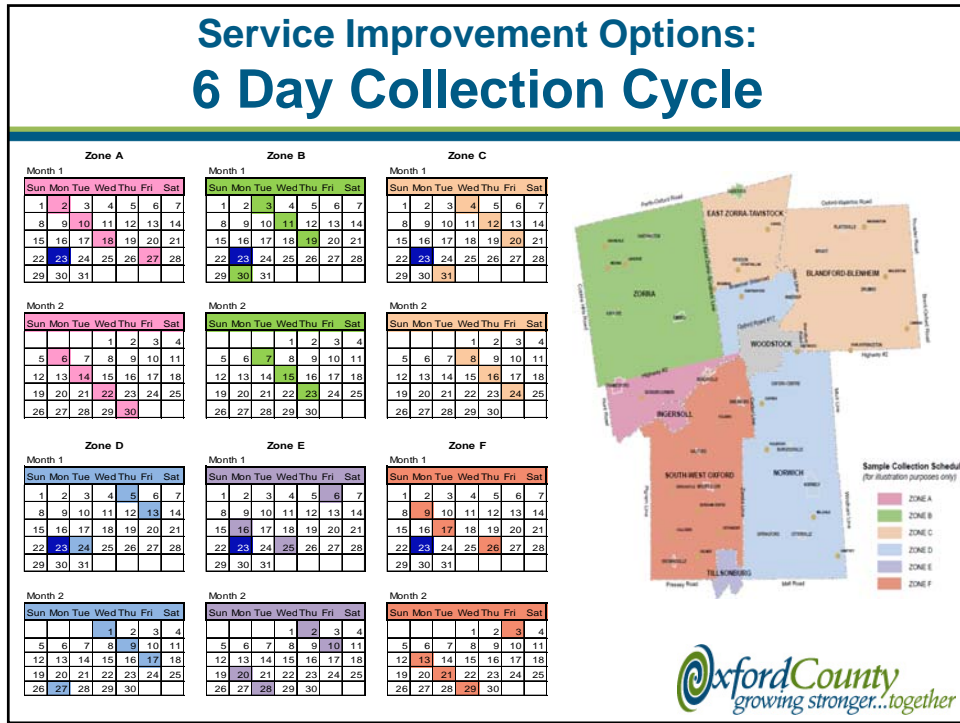
Increase Service Delivery

- Collections equal to average number of garbage setouts per year
- Increased recycling

Reduce Costs

- \$300,000 annual savings removed from tax base

*OxfordCounty*  
growing stronger...together



## Service Improvement Options: New Blue Box for Residents

- ④ 49% of available blue box materials are not recovered
- ④ Additional blue box may increase blue box capture rate by 9%
- ④ Dependent on the type of curbside collection program

Reduce Environmental Impacts

- Additional 644 tonnes of waste diverted annually

Increase Service Delivery

- Facilitates sorting

Reduce Costs

- Increased revenue from material sales = less tax dollars required for the program

**Oxford County**  
growing stronger...together

## Service Improvement Options: User-Pay System for LAC



## Service Improvement Options: User-Pay System for LAC



### Reduce Environmental Impacts

- Additional 450 tonnes of recyclable material diverted annually

### Increase Service Delivery

- Improves program consistency and reduces confusion

### Reduce Costs

- \$400,000 annual savings = less stress on tax base



## Service Improvement Options: Re-launch Backyard Composting

- ② Cost effective way to divert organics from landfill
- ② Proper management of backyard composter can eliminate odours and generate a nutrient-rich product for home gardening needs

### Reduce Environmental Impacts

- No GHG emissions from curbside collection
- Additional 250 tonnes of organics diverted annually

### Increase Service Delivery

- Process made easy by having access to tools, resources and equipment

### Reduce Costs

- More cost effective than a curbside program



## System Improvement Options: Bag Tag Pricing Sustainability Program

Municipality	Bag Tag Price
County of Oxford	\$1.50/bag (\$2.00/bag July 1 <sup>st</sup> )
County of Wellington	\$1.00 for small bag; \$1.75 for large bag
City of Kingston	\$2.00/bag
City of Stratford	\$2.40/bag
County of Simcoe	\$2.00 for first bag; \$3.00 for subsequent bags

### Reduce Environmental Impacts

- Promotes waste diversion

### Increase Service Delivery

- Minimizes variance between revenue and program costs

### Reduce Costs

- More you divert the less you pay

### Should bag tag revenue cover:

- Portion of garbage and disposal costs?
- All garbage and disposal costs?
- All waste management costs?





### System Improvement Options: By-Law Initiatives

- ② Amend Current Bag Tag By-Law
- ② 74% of survey respondents do not know the program requirements
- ② Develop a Current Collection By-Law
  - 90% of customer service complaints are due to resident error
  - 5% of audited homes had non-compliant set outs

Reduce Environmental Impacts

- Reduces Collection Contractor of County inspect efforts and associated travel times

Increase Service Delivery

- Improves collection efficiencies
- Reduces program confusion
- Increases service delivery

Reduce Costs

- Cost associated with investigating and inspecting non-contractor collection issues



### System Improvement Options: Tender Co-collection with Dual & Single Stream Recycling Options

- ② Routing efficiencies
- ② Single stream recycling increases blue box material capture rate by 7%

Reduce Environmental Impacts


- Additional 511 tonnes of recyclables diverted
- Reduces GHG emissions

Increase Service Delivery

- No sorting (single stream)
- Garbage & recycling collection at same frequency

Reduce Costs

- \$400,000 annual operating savings = less stress on tax base





## System Improvement Options: Curbside Routing Efficiency Analysis

- ② Fewer vehicles on the road reduces environmental impacts and costs over time
- ② Full utilization of equipment and labour will increase program efficiencies and reduce costs



### Reduce Environmental Impacts

- Reduces GHG emissions

### Increase Service Delivery

- Service delivery consistency

### Reduce Costs

- \$120,000 annual savings = less stress on tax base



## System Improvement Options: Identify Local Transfer Station Options

- ② Eliminate costs and service delays associated through direct haul to out of County processing facility
- ② Use of a local transfer station would reduce non-productive collection time associated with mid-day off loading of materials
- ② Use the City of Woodstock's transfer station or build a transfer station at the landfill site

### Reduce Environmental Impacts

- Reduces GHG emissions

### Increase Service Delivery

- Reduces collection delays

### Reduce Costs

- \$78,000 annual program savings



### System Improvement Options: Discontinue Scrap Metal Depots & Decrease Special Waste Collection Events

- ② Scrap Metal Depot material has dropped by 33 tonnes since 2004
- ② Special Waste Collection Event material has dropped 28 tonnes since 2010
- ② Initiate a Community Recycling Centre (CRC) partnership program with not-for-profit organizations

Reduce Environmental Impacts


- Reduced idle and travel times to transfer station

Increase Service Delivery

- Alternative collection outlets available

Reduce Costs

- \$25,000 annual program savings



### System Improvement Options: Implement Landfill Material Bans & an IC&I Waste Diversion Promotion Education Program

- ② To move towards a sustainable community the County should:
  - Introduce material bans for recyclable materials with a collection program in place
  - Initiate an IC&I waste diversion and promotion and education program

Reduce Environmental Impacts

- Additional 3,400 tonnes of material diverted annually


Increase Service Delivery

- Increase serviced delivery to IC&I sector

Reduce Costs

- Extend life of landfill site





## Next Steps



**Speak Up, Oxford!**

[www.oxfordcounty.ca](http://www.oxfordcounty.ca)

- ② Complete the feedback form before leaving this evening
- ② Visit the Speak Up, Oxford website, Let's Talk Trash 2 and complete the online survey
- ② Send us your comments through the Speak Up, Oxford website, Let's Talk Trash 2

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