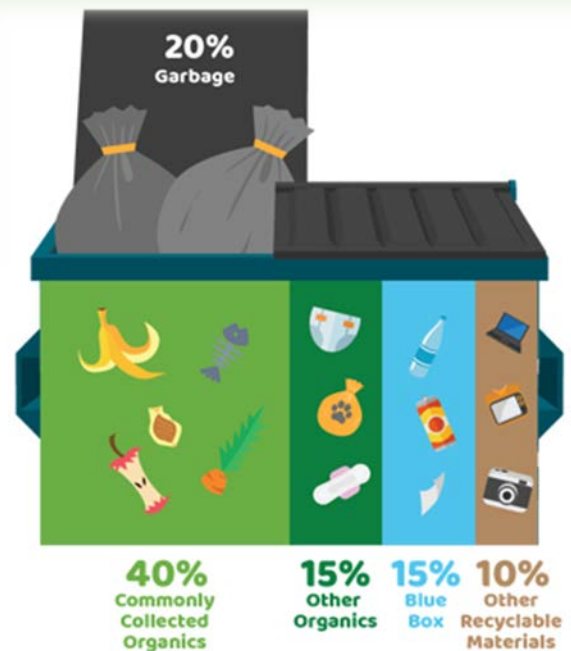


60% Waste Diversion Action Plan

What's in the garbage?



Single Family Homes



Apartments

Waste Management Working Group: July 13, 2018

Civic Works Committee: July 17, 2018

Municipal Council: July 24, 2018

Community Engagement: July 25 – September 27, 2018



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EXECUTIVE SUMMARY

Background

In London more than one tonne of waste is produced annually per person. This includes waste generated at home as well as waste generated by businesses. About a third of this waste is diverted through numerous waste reduction, reuse, recycling and composting programs. The overall waste diversion rate for London is between 30% and 35%. The residential (household) diversion rate is 45%.

To plan for the future, the City is developing a long term Resource Recovery Strategy. The Strategy involves the development of a plan to maximize waste reduction, reuse, recycling and resource recovery in an economical viable and environmentally responsible manner. The Resource Recovery Strategy includes a commitment by City council to increase the household waste diversion rate from 45% to 60% by the end of 2022. This report, 60% Waste Diversion Action Plan, details the actions required to meet this commitment. Work on the broader Resource Recovery Strategy continues with a focus on how to go beyond 60% diversion. Both projects also address the Strategic Plan for the City of London (2015-2019) and The London Plan (2016-2035).

Development of the Action Plan draws on a variety of sources of information, experience and insight from other waste management and environmental professionals. This included a review of other Ontario and other municipalities in Canada and the United States; consideration of regional resource recovery opportunities; engagement and feedback from the public; consideration and alignment with provincial strategies, direction and legislation; updating local waste composition data for curbside and multi-residential homes; and gathering information from the waste management and resource recovery industry.

Waste Composition

Single families make up about 70% of London's households and generate about 61,000 tonnes of the residential garbage each year that is collected and landfilled. A large percentage of this waste could be composted or recycled. About 7% is material that should have been placed in the Blue Box. A further 13% of the garbage, including textiles, scrap metal, electronics, renovation materials and plastic bags, which could have been dropped off at a depot, taken to a store for recycling or are materials that have been identified in the province's Strategy for a Waste-Free Ontario for future diversion programs.

About 60% of landfill garbage is primarily organic matter and is compostable/digestible. The organics are made up of food scraps (36% of all waste), non-recyclable paper like paper towel & paper napkins, yard waste, pet waste and sanitary products (e.g., diapers). About 30% of London's households live in multi-residential (apartment/condominium) buildings and generate approximately 23,000 tonnes of garbage per year. The garbage composition from multi-residential buildings is similar to the garbage

from single family households with some key differences (e.g., more recyclables, less food and organic waste).

Action Plan

This report proposes the following set of actions to achieve this goal (Table ES-1):

Table ES-1 Proposed Actions to Achieve 60% Residential Waste Diversion

Blue Box (Blue Cart) Programs
1. Increase capture of recyclables from 63% to 75% (less placed in the garbage)
New (or Expanded) Recycling Programs and Initiatives
2. Bulky Plastics <ul style="list-style-type: none"> a) Continue with existing pilot project b) Consider implementation of an expanded program once long term stable markets have developed
3. Carpets <ul style="list-style-type: none"> a) Wait to see if the Province develops a provincial program for carpets under the <i>Waste-Free Ontario Act</i> as there are limited markets for recycling carpets in the province b) If no provincial program exists by 2021, implement a pilot project
4. Ceramics <ul style="list-style-type: none"> a) Provide a drop-off location for ceramics at no cost at the City's EnviroDepots b) Ban toilets from curbside garbage collection
5. Clothing and Textiles <ul style="list-style-type: none"> a) develop a textile awareness strategy to promote existing reuse opportunities b) pilot depot collection at select multi-residential buildings
6. Small Metal (Small Appliances/Electrical Tools/Scrap Metal) <ul style="list-style-type: none"> a) implement semi-annual curbside collection of small metal items b) pilot depot collection at select multi-residential buildings
7. Furniture <ul style="list-style-type: none"> a) Begin semi-annual collection of wooden furniture b) Provide a drop-off location at W12A EnviroDepot for wooden furniture c) Ban wooden furniture from curbside garbage collection
8. Mattresses <ul style="list-style-type: none"> a) Wait to see if the Province develops a provincial program for mattresses under the <i>Waste-Free Ontario Act</i> as there are limited markets for recycling mattresses in the province b) If no provincial program exists by 2021, implement a pilot project
Curbside Organics Management Program
9. Implement a curbside Green Bin program
10. Implement bi-weekly garbage collection
Multi-Residential Organics Management Program

Table ES-1 Proposed Actions to Achieve 60% Residential Waste Diversion

11. Implement a mixed waste processing pilot (to recover organics and other materials) on a portion of the waste from multi-residential homes	<i>Table continues</i>
Other New Organics Management Programs	
12. Develop and implement a food waste avoidance strategy	
13. Reduce the cost of composters at the EnviroDepots and undertake additional sale events at select community locations	
14. Provide financial support to community groups or environmental organizations that want to set up a community composting program	
Waste Reduction and Reuse Initiatives and Policies	
15. Create a Waste Reduction and Reuse Coordinator position within the Solid Waste Management Division	
16. Provide financial support for community waste reduction and reuse initiatives	
17. Reduce the container limit to two or three containers per collection when the Green Bin program with bi-weekly garbage collection is operational	
18. Further explore the use of clear bags for garbage collection if London does not move to a roll-out cart based garbage collection system	
19. Further explore a full user pay garbage system if London moves to a roll-out cart based garbage collection system	
20. Further examine other incentive and disincentive initiatives (best practices) from other municipalities (e.g., mandatory recycling by-law, reward systems, user fees, etc.)	
21. Provide additional feedback approaches to residents (including how waste reduction and waste diversion are calculated when providing waste management progress reports)	

Benefits and Costs

By taking the steps outlined in this Action Plan, a number of environmental, social and financial benefits will be achieved. These include increased waste diversion (33% more diversion); creation of jobs (between 125 and 170 direct and indirect; within and outside London); reduced greenhouse gas emissions (equivalent of removing 4,200 to 6,800 cars from the road); reduced landfill impacts; better use of material and resources; residents will feel satisfaction or pride of living in an environmentally progressive community; and short-term landfill cost savings.

It is expected that approval of any expansion of the landfill by the Ministry of Environment, Conservation and Parks (MECP) would be unlikely unless the City has programs in place to achieve 60% waste diversion. The increase in waste disposal costs will be significant if the City must export its waste to a private landfill elsewhere in Ontario. The increase in disposal costs for the City to export its waste is estimated to be

approximately \$5 to \$7 million per year.

The approximate cost, expected diversion and timeline for implementation for the actions listed above are summarized in Table ES-2.

Table ES-2 - Summary of Diversion, Estimated Operating Costs and Schedule

Program Category	Diversion Rate		Annual Estimated Operating Cost			Schedule
	Range	Likely	Range	Likely	\$/Hhld ^a	
Blue Box Recycling Improvements	1% - 3%	2%	\$0	\$0	\$0	Likely not under City control ^b in the future
New Recycling Programs and Initiatives	0.4% - 0.8%	0.6%	\$350,000 - \$550,000	\$450,000	\$2.00 - \$3.00	2019 ^c - 2021
Curbside Organics Management Program	8% - 12%	10%	\$3,900,000 - \$5,500,000	\$5,000,000	\$21.75 - \$30.50	2020 - 2022
Multi-Residential Organics Management Pilot Program	0.5% - 0.7%	0.6%	\$400,000 - \$700,000	\$500,000	\$2.25 - 4.00	2020
Other Organic Management Programs	0.3% - 0.6%	0.4%	\$250,000 - \$350,000	\$300,000	\$1.50 - \$2.00	2019 ^c - 2021
Waste Reduction, Reuse Initiatives and Policies	1% - 4%	1.4%	\$150,000 - \$350,000	\$250,000	\$0.50 - \$2.00	2019 ^c - 2021
Total^d	11% - 21%	15%	\$5,050,000 - \$7,450,000	\$6,500,000 (\$36.00)	\$28.00 - \$41.50	2019^c - 2022

Notes:

a) Based on 180,000 households.

b) The provincial Waste-Free Ontario Strategy calls for a transition from the current Blue Box program, which is municipally managed and co-funded by industry and municipalities, toward a full extended producer responsibility (EPR) and/or individual

responsibility (IPR) program by 2023. The EPR program will require producers to take full financial and operational responsibility for all Ontario municipal Blue Box programs.

- c) 2019 Multi-year budget has \$140,000 assigned to new waste diversion initiatives.
- d) Totals may not add due to rounding.

Financial Considerations – Funding 60% Waste Diversion

Potential funding sources to lower the annual cost of \$5.05 - \$7.45 million by \$1.8 to \$3 million per year are highlighted below.

Operating Costs

As shown in Table ES-2, annual operating costs for the 60% Waste Diversion Action Plan will range from \$5.05 million to \$7.45 million and will depend on final program design, market competition, etc. The most likely annual operating cost is estimated to be \$6.5 million.

City staff continue to examine a number of financing approaches. The change in government in Ontario has created additional uncertainty as a number of potential revenue sources for waste diversion are on hold. Besides taxes, potential sources of revenue currently include:

- Additional recycling program costs paid by industry - potential cost savings from expected transition from the current Blue Box program, which is municipally managed and co-funded by industry and municipalities, toward a full EPR program paid 100% by industry by 2023. This is expected to reduce the City's current waste diversion program costs by \$1.5 to \$1.8 million. In addition there is the potential of one time capital funding for recycling infrastructure. It is not clear when full funding would be paid to the City.
- Other extended producer responsibility revenues - for items such as branded organics (e.g., diapers, soiled paper, tissues/toweling) carpets, textiles, furniture and other consumer goods. These sources could range between \$50,000 and \$150,000 per year.
- W12A Landfill levy to support diversion - a specific amount charged per tonne of garbage disposed of at the landfill that is placed in a dedicated fund for waste reduction and diversion. The amount that could be collected is based on many factors (e.g., which garbage is it applied to, what fee, etc.). Levies between \$2 and \$20 per tonne are in place in some jurisdictions. Revenue from this source could range between \$250,000 and \$1 million per year.
- Greenhouse gas offset credits associated with organics diversion – the Government of Ontario was working on introducing an emissions offset protocol for aerobic composting into Ontario's Cap & Trade program, based on an existing protocol used in Alberta (e.g., five composting projects currently listed on the Alberta Emissions Offset Registry). The value of these offsets would have been between \$100,000 and \$500,000 per year based on an assumed value of around \$20 per tonne of GHG

emissions offset (and increasing over time). It is unclear at this time how/if this funding opportunity will be replaced by the current provincial government.

A summary of estimated operating costs and potential annual funding is identified on Table ES-3.

Table ES-3 – Summary of Estimated Costs and Potential Funding

	Low	High	Likely (Anticipated)
Costs (Table ES-2)	\$5,050,000	\$7,450,000	\$6,500,000
Revenues	\$1,800,000	\$2,950,000	\$2,000,000
Total Estimated Costs			\$4,500,000

Capital

Capital costs for the 60% Waste Diversion Action Plan will depend on program design, technology considerations, etc. The largest capital expenditure will be for the Green Bin Program. A capital cost of \$12 million for the Green Bin program had previously been estimated (January 2016, Multi-year Budget deliberations). Other waste diversion initiatives listed in the Action Plan may require new investment in the order of \$500,000 to \$3 million for a total of \$12.5 to \$15 million in capital expenditures.

It is expected that capital costs for the 60% Waste Diversion Action Plan will be able to be funded from the existing capital budget. The current ten-year capital program includes \$35 million in 2020 for new solid waste diversion technologies to increase diversion. After allocating up to \$15 million for the Action Plan, there would be \$20 million left for advanced waste diversion and/or resource recovery technologies.

Additional Community Engagement

The community engagement proposed for the 60% Waste Diversion Action Plan is presented in Table ES-4.

Table ES-4 – Community Engagement for 60% Waste Diversion Action Plan

Date	Event	Comments
July 17, 2018	CWC Meeting	<ul style="list-style-type: none"> Approve in Principle Draft Action Plan to achieve 60% waste diversion by 2022 Approve to circulate and receive feedback on the 60% Waste Diversion Action Plan
July 24	Council	
July 25 to September 10	Provide feedback opportunities on WhyWaste Resource Recovery Strategy website	<ul style="list-style-type: none"> Advertise in the London Free Press, The Londoner and on social media

Table ES-4 – Community Engagement for 60% Waste Diversion Action Plan

Date	Event	Comments
	Circulate to Community Stakeholder Groups	<ul style="list-style-type: none"> • Circulate and ask for feedback from Waste Management Community Liaison, Committee (WMCLC), W12A Landfill Public Liaison Committee, Urban League and Advisory Committee on the Environment (ACE)
	Circulate to Waste Management/ Recycling Companies	<ul style="list-style-type: none"> • Circulate and ask for feedback from local companies including Emterra, Green Valley Recycling, Miller Waste, Orgaworld, StormFisher, Try Recycling, Waste Connections and Waste Management
	Community Festival	<ul style="list-style-type: none"> • Attend Gathering on the Green II, Sunday August 19, 2018
	Presentations	<ul style="list-style-type: none"> • Present to WMCLC in early August (TBD) • Present to ACE on September 5, 2018
September 27	Public Participation Meeting	<ul style="list-style-type: none"> • CWC receives comments from the public and other stakeholders
January/ February 2019	CWC Meeting	<ul style="list-style-type: none"> • Approval of 60% Waste Diversion Action Plan • Implementation details and final cost estimates to be provided at this time