Presentation to Civic Works Committee

July 17, 2018

Environmental & Engineering Services

60% Waste Diversion Action Plan

What's in the garbage?

Single Family Homes

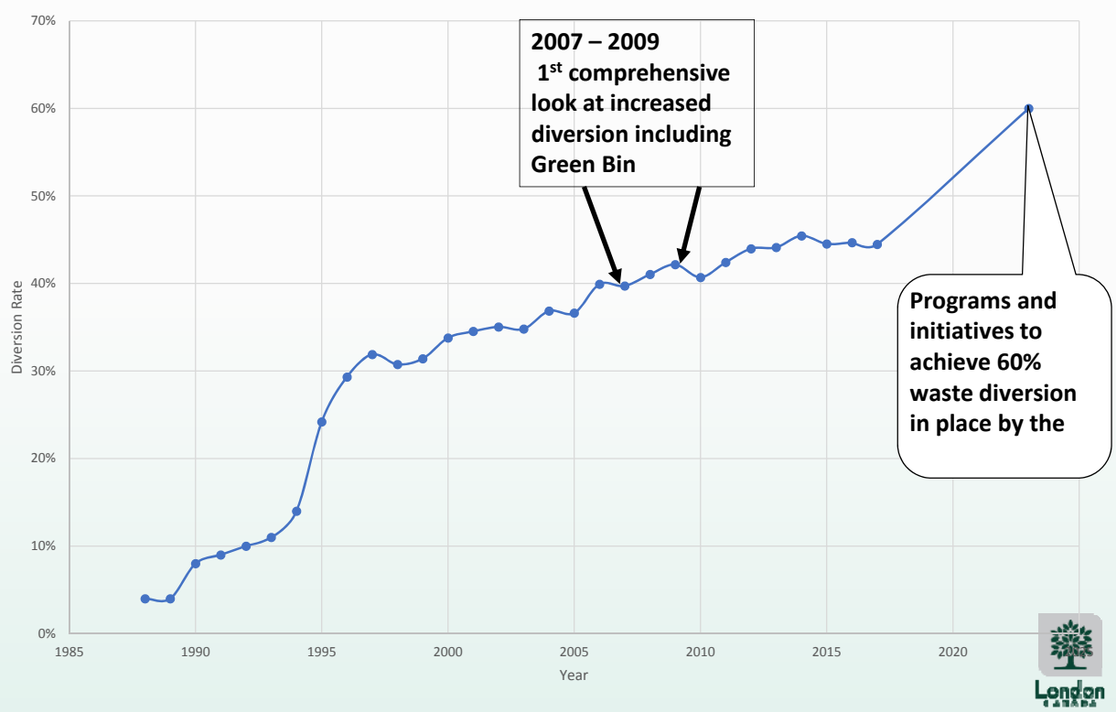
Apartments

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

Why Waste? *getinvolved.london.ca*

London CANADA

The Road to 60% Diversion



London CANADA

Council Direction(s)

October 30, 2017 Council direction:

"The W12A Landfill expansion be sized assuming the residential waste diversion rate is 60% by 2022 noting this does not prevent increasing London's residential waste diversion rate above 60% between 2022 and 2050."

July 13, 2018 Waste Management Working Group:

The action plan to achieve 60% waste diversion by 2022 BE SUPPORTED IN PRINCIPLE; and,

The release of the report for review and comment by the general public and other stakeholders BE SUPPORTED . .

Council Direction(s)

Strategic Plan for the City of London (2015-2019):

Increase efforts on more resource recovery, long-term disposal capacity, and reducing community impacts of waste management.

The London Plan (December 28, 2016):

Direction #4 *Become one of the greenest cities in Canada*

#12 Minimize waste generation, maximize resource recovery, and responsibly dispose of residual waste.

Provincial Direction(s)

60% waste diversion goal is a key London commitment as part of the Environmental Assessment for the W12A Landfill expansion

Many Targets ("must")

- 70% reduction/recovery of food and organic waste from SF homes by 2025
- 50% reduction/recovery of food and organic waste generated at the building by 2025

How much waste and resources?

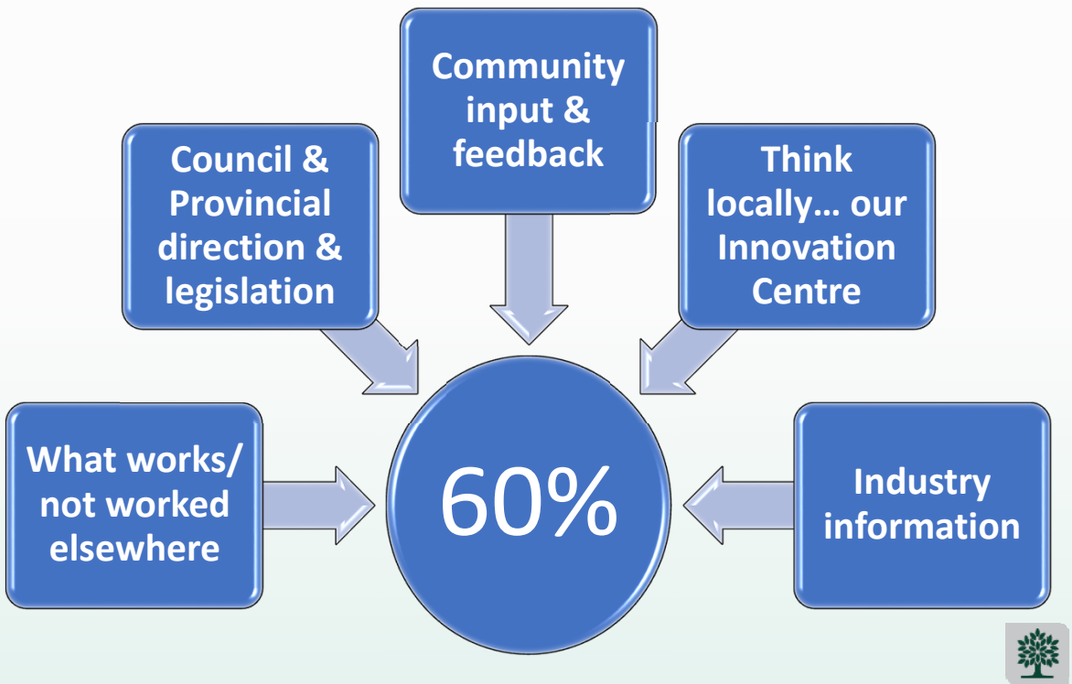
Single Family
129,900 tonnes
50% diverted

Multi-residential
29,400 tonnes
18% diverted

Industrial, Commercial & Institutional
~ 170,000 tonnes
~ 20% diverted

Construction, Renovation & Demolition
~ 120,000 tonnes
~ 50% diverted

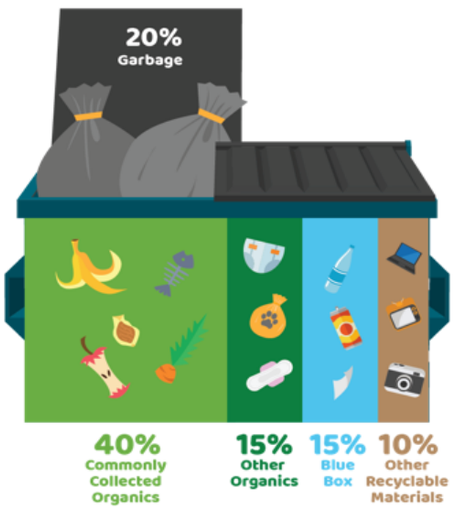
How this Report was Prepared



Waste Composition

61,200 tonnes

22,250 tonnes



Composition – *Did You Know!!*

Top 5 Diversion Opportunities	Estimated tonnes	% of Waste	Kg/hhld/ year
1. Avoidable food waste	19,300	23%	107
2. Other organics	12,300	15%	68
3. Unavoidable food waste	10,100	12%	56
4. Pet waste	8,500	10%	47
5. Items for Blue Box/Cart	8,300	10%	46
Total	58,500	70%	324

Blue Box – Blue Carts

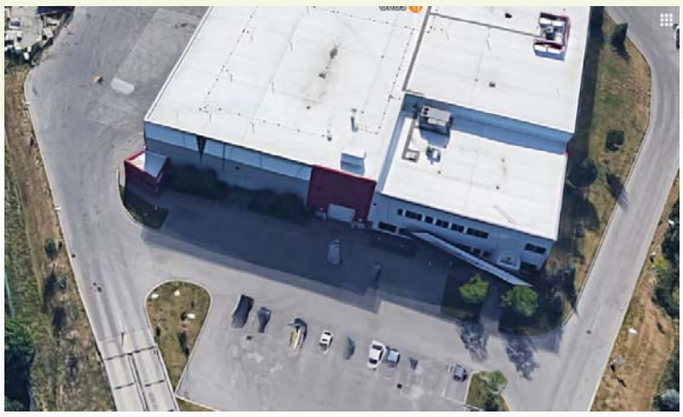
Why is this important?	• Provincial law - shifting to EPR is key • Industry will be funding
How many actions?	• None; Industry will be responsible • Council/City staff to continue to push
How much will it divert?	• 1% to 3% • 1,600 to 4,800 tonnes
What is the cost/hhld estimate?	• SAVINGS estimated at $1.5 to $1.8 million by 2022+ • SAVINGS $8.00 to $10.00 per year

New (or Expanded) Recycling

Why is this important?	• Items are easy to identify/describe • Identified in provincial direction
How many actions?	• 7; some pilot projects • Support local jobs; potential for more • New business opportunities
How much will it divert?	• 0.4% to 0.8% • 640 to 1,280 tonnes
What is the cost/hhld estimate?	• Range $2.00 to $3.00 per year • Likely $2.50

Curbside Organics

Why is this important?	• Largest portion of garbage (up to 60%) • Proven programs (that have improved) • Legislated
How many actions?	• 2 • Weekly Green Bin, recycling • Biweekly, same day garbage pickup
How much will it divert?	• 8% to 12% • 13,000 to 20,000 tonnes
What is the cost/hhld estimate?	• Range $21.75 to $30.50 per year • Likely $28 (curbside home only $40)



Mixed Waste Processing and Mechanical/Biological Treatment (MBT)

FOCUS - Green Bin vs Mixed Waste Processing

MWP Advantages

Environmental

- 25% to 80% more organics captured
- 25% to 80% more GHG reduction

Social

- More convenience
- No “Yuk” factor

MWP Disadvantages

Financial (Curbside Homes)

- Costs $70 to $115/hhld compared to $30 to $45/hhld for Green Bin

Technical

- Rules are evolving
- Uncertainty for product(s) quality

Multi-res Organics

Why is this important?	• Largest portion of the waste stream • Legislated
How many actions?	• 1 • Pilot project (15%) – mixed waste processing and composting/digestion • Follow progress of other communities
How much will it divert?	• 0.5% to 0.7% • 800 to 1,120 tonnes
What is the cost/hhld estimate?	• Range $2.25 to $4.00 per year • Likely $2.75 (Multi-res unit only $62.50)

Other Organics Programs

Why is this important?	• Food waste avoidance should be a priority • Lowers costs; community oriented
How many actions?	• 3 • Builds on 2 existing actions, BYC and community composting
How much will it divert?	• 0.3% to 0.6% • 480 to 960 tonnes
What is the cost/hhld estimate?	• Range $1.50 to $2.00 per year • Likely $1.75

FOCUS – Food Waste Avoidance

Local Research (Western University), local Pilot Projects and experience in Canada, USA and Europe

- **Audits – confirmed up to 2/3rds avoidable food waste**
- **$450 to $600 per household ($80 to $100 million/year) in avoidable food**
- **10% reduced = $8 to 10 million saved locally**

Reduction & Reuse

Why is this important?	• Lowers costs; community oriented • Council policies, directions and by-laws set stage
How many actions?	• 7, includes community investment • People are the driving force behind reduction and reuse
How much will it divert?	• 1% to 4% • 1,600 to 6,400 tonnes
What is the cost/hhld estimate?	• Range $0.50 to $2.00 per year • Likely $1.50

Ipsos Survey June 2018

Parameters

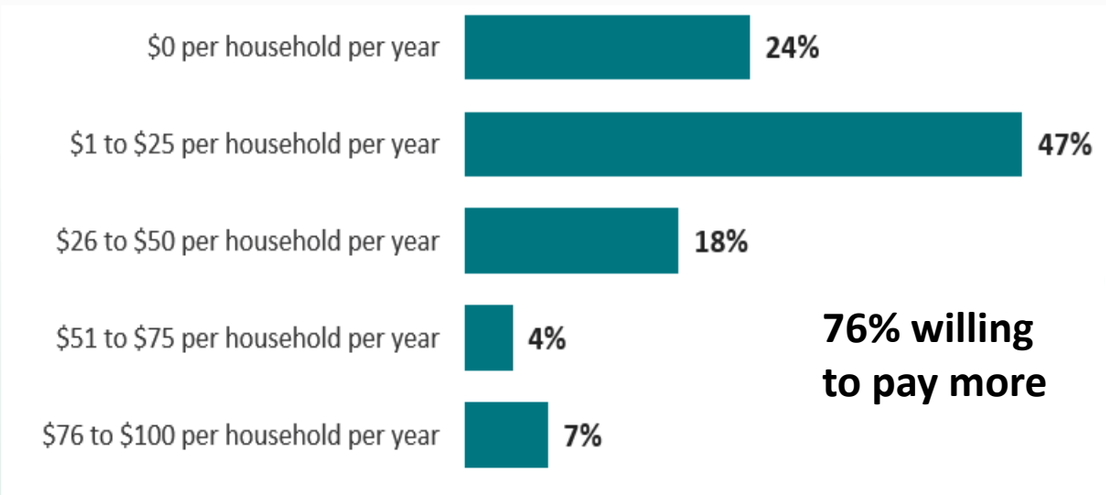
- 301 respondents; Single family and a
- +/- 6.4%, 19 times out of 20

Findings

- waste diversion is somewhat or very important (93%) with 53% stating very important
- support food waste avoidance program (88%)
- support curbside/multi organics program (75%)
- prepared to deliver more to depots (65%)

Ipsos Survey June 2018

Willingness to pay more for increased waste diversion



Benefits

Environmental

- increased waste diversion (33% more)
- reduced GHG gas emissions (equivalent of removing 4,200 to 6,800 cars)
- reduced landfill impacts (odour, traffic)
- better use of material and resources

Benefits

Social

- creation of jobs (between 125 and 170, direct & indirect)
- satisfaction/pride of community

Financial

- short-term landfill cost savings
- avoid long term waste export costs ($5 to $7 million/year)

Estimated Annual Costs

Program Category	Cost Range	Likely Cost
Blue Box/Cart Recycling	$0	$0
New Recycling Programs and Initiatives	$350,000 - $550,000	$450,000 *($2.50)*
Curbside Organics Management Program	$3,900,000 - $5,500,000	$5,000,000 *($27.75)*
Multi-Res Organics Pilot Program	$400,000 - $700,000	$500,000 *($2.75)*
Other Organic Programs	$250,000 - $350,000	$300,000 *($1.75)*
Waste Reduction, Reuse Initiatives and Policies	$150,000 - $350,000	$250,000 *($1.50)*
Total	**$5,050,000 - $7,450,000**	**$6,500,000 *($36.00)***

Estimated Capital Costs

Program Category	Items	Estimated Cost
New Recycling Programs and Initiatives	• EnviroDepot Improvements	$500,000 to $2,700,000
Curbside Organics Management Program	• Green Bin Carts • Kitchen Catchers • Collection Vehicles	$12,000,000
Other Organic Management Programs	• Community composting	$100,000
Waste Reduction, Reuse Initiatives and Policies	• Reuse facilities	$200,000
Total	**$12.5 - $15 million**	

Potential Funding Sources

Source	Potential Amount	Possible Date	Who Controls	Level of Risk
Full EPR for Blue Box	$1.5 M to $1.8 M	2022 to 2025	Province	Low
Full EPR for Other Programs	$50,000 to $150,000	2023/ 2025	Province	High
W12A Landfill Levy	$250,000 to $1 M	2020/ 2022	City	Low
Total	**$1,800,000 - $3,000,000 ($2,000,000 likely)**			

Annual Cost Summary

	Low	High	Likely (Anticipated)
Cost	$5,050,000	$7,450,000	$6,500,000
Cost/hhld	**$28.00**	**$41.50**	**$36.00**
Revenue	$1,800,000	$2,950,000	$2,000,000
Revenue/hhld	**$10.00**	**$16.50**	**$11.00**
Total Estimated Cost	**Requires financing strategy as funding/revenues come later** →		$4,500,000
Total cost/hhld			**$25.00**

Multi-year Budget Outlook

3 Year Investment	$1,300,000	$3,900,000	$6,500,000

60% Multi-Year Budget	2020	2021	2022
Blue Box/Blue Cart Recycling	$0	$0	$0
New Recycling Initiatives	$150,000	$300,000	$0
Curbside Green Bin Program	$200,000	$2,200,000	$2,600,000
Multi-Res Organics Pilot	$500,000	$0	$0
Other Organics Programs	$300,000	$0	$0
Reduction & Reuse Initiatives	$150,000	$100,000	$0
Totals	**$1,300,000**	**$2,600,000**	**$2,600,000**

Potential funding will lower these amounts

2016 Municipal Comparisons

- 49% - Ontario average waste diversion

- 66% Region of York (inc. Markham at 71%)
- 61% County of Simcoe
- 60% County of Dufferin
- 60% City of Kingston

- 50-59% - 16 communities

Source: Resource Productivity & Recovery Authority

MBNC Cost Comparisons

2016 Municipality	Cost per Household		
	Collection & Disposal	Diversion	Total
London (existing)	$89	$50	$139
Hamilton (lowest Diversion & GB)	$150	$69	$218
Niagara (Lowest with GB)	$90	$102	$192
Average of 9 GB municipalities	$127	$100	$227
London (60% - likely cost)	$87	$86	$173
London (60% - high cost)	$87	$91	$178

Next Steps – 60%

Next Steps	Comments	Timeline
CWC and Council "Approval in Principle"	• CWC Meeting – July 17 • Council - July 24	July 2018
Seek Community Feedback on Action Plan	• Interactive WhyWaste website • Circulate to Stakeholder Groups • Attend Gathering on the Green II • Presentations to WMCLC and ACE • Public Participation Meeting (Sept. 27)	July to September, 2018
CWC and Council Approval	• Implementation details and final cost estimates to be provided	January/ February, 2019