

Waste Strategy Deliverables Update

Attachment 2 provides an update on the Waste Strategy deliverables and work completed since the last update report to Public Works and Infrastructure Committee on September 22, 2015. Table 1 below provides an overview of the deliverables required to complete the Long Term Waste Management Strategy.

Table 1: Overview of Steps to Complete the Long Term Waste Strategy

Deliverables	Overview
Stakeholder and Public Consultation and Engagement Plan, Communications Plan (Deliverable 1)	This document outlines key stakeholders and opportunities and tactics for engagement. A separate Communications Plan, developed by Strategic Communications staff, complements the consultation plan and is a living document that identifies strategic objectives, key messages and tactics to promote the Waste Strategy to the public and stakeholders.
Current Waste Management Profile (Deliverable 2)	This report documents each aspect of the City of Toronto’s waste management system, including but not limited to programs, initiatives and facilities. It also provides a history of waste management in Toronto; and an overview of waste policy and legislation, education and enforcement, and performance monitoring.
Needs Assessment (Deliverable 3)	This report documents the City’s waste management needs over the 30 to 50 year planning horizon. The Needs Assessment consists of three components: Vision and Guiding Principles; projections; and gaps, challenges and/or opportunities.
Identify Options to Address Needs (Deliverable 4)	Deliverable 4 includes the development of a list of potential options covering the full range of the waste management hierarchy, with a primary focus on the first 3Rs.
Detailed Evaluation of Options, Identify Recommended Options & Current System Overlay (Deliverable 5)	Specific evaluation methodology and criteria were developed to include: environmental criteria, social criteria, and financial criteria, which support a triple bottom line evaluation. This deliverable concludes with a series of recommended options that are deemed suitable for implementation in the City of Toronto.
Strategy Roadmap Development (Deliverable 6)	After the recommended list of options was compiled and combined with the current system, a “roadmap” for implementation was developed.
Final Strategy (Deliverable 7)	The final step is the preparation of the Long Term Waste Management Strategy, which describes the identified options and outlines the preferred long term waste management system. The Waste Strategy fully documents the process undertaken in the

Deliverables	Overview
	above tasks, key information gathered, decisions made, and supporting rationale.

Further details on each deliverable are provided below.

Deliverable 1: Stakeholder and Public Consultation and Engagement, Communications Plan

The third and final phase of public consultation and engagement events will provide an opportunity to comment on the draft recommended options to be included in the Waste Strategy and information related to implementation of the recommended options.

The events will also close the loop on the topics consulted on during the Phase 2 consultation period including the vision statement, guiding principles, evaluation criteria and options, by presenting final Council approved versions of these components and highlighting how they were changed to accommodate public input received. This consultation phase will build on the previous phases and aims to continue to build interest and momentum that will be of value to the City during the Waste Strategy implementation.

City Council Engagement

Toronto City Council will have an opportunity to provide their feedback on the draft Waste Strategy through an online survey and through Phase 3 public consultation meetings. All comments and feedback will be considered in the development of the final Waste Strategy, which will be presented for consideration to the Public Works and Infrastructure Committee on June 20, 2016 and City Council on July 12-13, 2016.

In March/April 2016, Solid Waste Management Services staff will host Councillor Briefing Sessions to provide Councillors and their staff with an overview of the Phase 3 public and stakeholder consultation and engagement content and details, including ways for the public to provide their feedback and get/stay involved in the project. Further details on these Councillor Briefing Sessions will be communicated in early March 2016.

In addition, the Mayor and Members of City Council will receive prepared “matte” stories to assist them in communicating the consultation events to their constituents.

Stakeholder Advisory Group

A Stakeholder Advisory Group has been established to provide input and feedback to the Project Team at key points in the development of the Waste Strategy. The group consists of key stakeholders from various organizations with expertise and an interest in the waste that is managed by the City. Members represent the following sectors: local business improvement areas, environment, education and academia, multi-residential, social planning, waste industry representatives, and retail. All Stakeholder Advisory Group meetings are open to the public and the meeting minutes are posted on the project website.

The Stakeholder Advisory Group has met three times since September 2015. Table 2 below outlines the meeting goals for these meetings.

Table 2: Stakeholder Advisory Group Meeting Objectives (Nov 2015 - Feb 2016)

Meeting Date	Meeting Goal & Objective
November 16, 2015	<p>To update SAG members regarding project activities (since the last meeting) and anticipated future activities. Also review examples of the evaluation criteria being applied to selected/sample options and discuss possible approaches for further review of the remaining completed options. Specific objectives include:</p> <ul style="list-style-type: none"> • Provide an update on past (since the last meeting) and future project activities and schedule including the results of the Phase 2 consultation and plans for the Phase 3 consultation • Distinguish between the “hows” of the evaluation process and the results • Review and discuss how the evaluation criteria have been applied to selected (initially) options (Option # 2 (reduction/reuse) and Option #3 (drop off). • Discuss and determine the best way for the SAG to consider the evaluation of the remaining options, given the bulk and in-depth nature of the information
December 14, 2015	<p>To review and obtain SAG input on preliminary evaluation results for IC&I; Multi-Res; Control, Influence & Enforcement. Specific objectives include:</p> <ul style="list-style-type: none"> • Provide a recap the purpose of the Waste Strategy and the evaluation process • Provide an overview of the preliminary results for the above noted option groupings • Obtain comments on the preliminary evaluation results with supporting data/rationale • Provide guidance on additional input requested from SAG members
January 29, 2016	<p>To provide an overview of how public health and health care costs were incorporated into the evaluation process. Review and obtain SAG input on preliminary evaluation results for Recovery & Residual. Specific objectives include:</p> <ul style="list-style-type: none"> • Provide a recap the purpose of the Waste Strategy and the evaluation process • Provide an overview of the preliminary results for the above noted option groupings • Obtain comments on the preliminary evaluation results with supporting data/rationale • Provide a summary of the recommended options

The Stakeholder Advisory Group will meet twice more to review the draft Waste Strategy and to better understand the content of the final Waste Strategy.

Public Consultation Events

As part of the Phase 3 consultation, three key mechanisms will be used to engage the public and stakeholders and solicit their feedback on the draft Waste Strategy: one Overview Event; three Topic Specific events; and online engagement opportunities.

- Overview Event

This event will occur in late-March 2016. The event will provide an overview of the draft Waste Strategy process; a report back on key input heard during the last phase of consultation; an overview of the recommended options and implementation road map; and the next steps.

The meeting will begin with a brief open house with display panels, followed by an overview presentation from the project team. Participants will have an opportunity for discussion with the project team. For those unable to attend the meeting in person, the presentation will be made available on the project website.

- Topic Specific Events

Three Topic Specific events will be held in early to mid-April, 2016 to allow for more in-depth discussions, focusing on the implementation of the recommended options within the topic grouping. The Topic Specific events include:

- 3Rs (Reduce, Reuse, Recycle) & Multi-Residential
- Industrial, Commercial & Institutional (IC&I); Construction, Renovation & Demolition (CRD)
- Residual, Recovery

The events will be held during the evening hours, with the exception of the IC&I and CRD event, which will be held during the day. All events will be open to the public with invitations also going to relevant key stakeholders identified throughout the development of the project.

Each meeting will begin with a presentation from the project team to provide a brief overview of the Waste Strategy process, followed by more detailed information on the specific topic to be discussed. After the presentation, participants will have an opportunity for discussion with the project team.

All presentations will be placed on the project website along with a short survey to obtain input.

- Online Engagement

As noted above, all event presentations and surveys will be available online to the increase the engagement of the public and stakeholders. In addition, for those interested in digging deeper in to the results of the evaluated options, all evaluation tables will be posted on the project website for review and comment.

The meetings will be promoted using a variety of communications tactics such as print media advertisements, social media, the project website, the Waste Strategy e-mail subscribers list, outreach events, and through Key Stakeholder and Stakeholder Advisory Group networks.

Key Stakeholder Meetings

As part of the Phase 3 consultation, Solid Waste Management Services will invite its key stakeholders to the Public Consultation Events to receive input on the draft Waste Strategy. The same key stakeholders that were engaged during the Phase 2 consultations will be engaged again in March – April 2016.

Stakeholders from the Industrial, Commercial & Institutional (IC&I) and Construction, Renovation & Demolition (CRD) sectors will also be invited to this phase of consultation.

Additional meetings will be held with staff from the Ministry of the Environment and Climate Change and City Divisions, Agencies and Corporations. Specifically, staff will continue to engage and consult with members of the Executive Environment Team, which consists of senior management representatives from City Divisions, Agencies and Corporations.

In addition, staff continue to bring forward project information to the Green Lane Landfill First Nations communities during the development of the Waste Strategy.

Community Outreach Events

Information on the Waste Strategy will be provided during the 2016 Community Environment Days held from April through to July 2016. This will provide members of the public an opportunity to speak with Solid Waste Management Services staff to learn more about the project and the various ways in which to become engaged.

Staff organized the final event in the “Wast(ED)” Educational Speaker Series. This final “Wast(ED)” event took a different approach in that it was a satellite host to Metro Vancouver's Zero Waste Conference on October 29, 2015. Presenters from around the world delivered insights into zero waste principles and the circular economy. The 2015 Zero Waste Conference participants included ‘start -ups’, major corporations, and government. In Toronto, 85 participants attended the event and engaged with the Vancouver audience of 700 via the use of a moderator, an interactive Q&A platform technology called Pigeon Hole, and a two-way livestream of the events.

As part of the Waste Strategy, Solid Waste Management Services was a program sponsor of an art installation for Scotiabank Nuit Blanche, which was held from sunrise to sunset on October 3 – 4, 2015. The art installation demonstrated that “everything must go somewhere”, thus there is

no “away” to which things can be sent. This installation confronted the public with the unimaginable cumulative mass of waste that society produces and brought awareness to the limited landfill space available and the actions and choices people make. Sean Martindale and JP King were the artists that created the installation.

The installation was made of 131 bales of Toronto's recyclables (5 bales of Aluminum, 45 Aluminum Cans, 10 HDPE / 12 PET types of plastic, 44 Steel, 5 old corrugated cardboard, 5 Mixed Paper, 5 Plastic Film). This represents a fraction of the daily amount managed at the recycling sorting facility in Toronto that processes its Blue Bin materials. After the installation was complete, the bales were returned to the sorting facility to be sold to market. Figure 1 shows a panoramic picture of a portion of the installation.

Figure 1: There is No Away Art Installation



Communication and Engagement Tools

Project Update #5 was issued to highlight City Council's approval in October 2015 of the Long Term Waste Management Strategy Vision, Guiding Principles, and Evaluation Criteria. Project Update #5 was communicated to the public and stakeholders through a variety of internal and external communication tactics including: the project website, Waste Strategy e-mail subscribers list, posters at Community Centres, Civic Centres, libraries, leveraging key stakeholder and Stakeholder Advisory Group member networks, and internal staff communications.

Project Update #6 will be issued in March, prior to the launch of the consultation process. The content for this Update will focus on the consultation details and opportunities for the public and stakeholders to become involved. The update will also highlight the completion of the draft Waste Strategy document and next steps. The Update will be communicated widely to ensure a broad distribution.

The project website (www.toronto.ca/wastestrategy) continues to be updated with new information, as it becomes available. All communication and outreach materials direct participants to the web site for more detailed information. Since January 2015, nearly 16,500 people have visited the site.

Staff will continue to utilize social media (e.g. Twitter) to assist with promoting the Phase 3 consultations for the draft Waste Strategy. Tweets are sent via the Strategic Communications (@TorontoComms) or Get Involved (@GetInvolvedTO) Twitter accounts and are used to

promote upcoming events, the release of a Project Update or survey, and to initiate thought and discussion on waste-related topics. The project also has a dedicated hashtag (#TOWastestrategy) in order to further encourage social media engagement.

Staff are maintaining a log of comments that are received through the project e-mail address (wastestrategy@toronto.ca), phone, mail, and fax. Currently, there are 778 subscribers to the email listserv. Between October 1, 2015 and January 15, 2016, the City received 37 comments via e-mail from the public and 8 phone calls. The questions and comments were received in regards to: general solid waste inquiries; questions about garbage and recycling in Toronto; requests for presentations and tours of Toronto solid waste facilities; information from vendors, energy from waste; and by-laws and control for the Industrial, Commercial & Institutional sector. Additional questions were received regarding the satellite location for the Vancouver Zero Waste Conference hosted by the Waste Strategy and comments regarding zero waste best practices. No mail or faxes were received between October 2015 and the middle of January 2016.

Deliverable 2: Current Waste Profile

To initiate the development of the Waste Strategy, a comprehensive Current Waste Profile report was created to document each aspect of the City of Toronto's current waste management system. The City of Toronto Solid Waste Management Services Division is one of the largest municipal solid waste management operations in North America, servicing nearly 1,000,000 customers.

The Current Waste Profile provides details on the following information:

- The history of waste management in Toronto
- Review of municipal, provincial and federal waste-related policy and legislation
- Detailed overview of the solid waste system (collection, transfer, processing, and disposal)
- Waste generation, composition, and diversion rates
- Privately managed waste
- Solid waste education and enforcement
- Financial overview
- Progress and performance monitoring

The Current Waste Profile, which is finalized and posted on the project website (www.toronto.ca/wastestrategy), was created as the foundation from which project deliverables are being developed.

Deliverable 3: Needs Assessment

The *Needs Assessment* examines the 30 to 50 year planning horizon and identifies where the City needs to go during that period. It consists of three main components: Vision Statement and Guiding Principles; Projections; and Gaps & Challenges. This deliverable is now complete and posted to the project website (www.toronto.ca/wastestrategy).

Vision

The following Vision Statement was approved by City Council in October 2015:

"Together we will reduce the amount of waste we generate, reuse what we can, and recycle and recover the remaining resources to reinvest back into the economy. We will embrace a waste management system that is user-friendly, with programs and facilities that balance the needs of the community and the environment with long term financial sustainability. Together, we will ensure a safe, clean, beautiful and healthy City for the future."

Guiding Principles

The following Guiding Principles were approved by City Council in October 2015:

- 1) *Work to Mitigate Climate Change Impacts*- To reduce our impact on climate change we will find solutions that reduce greenhouse gas emissions associated with our waste management system.
- 2) *Treat Waste as a Resource*- Waste is an asset that needs to be conserved. We should make best use of our waste by recovering materials and energy remaining after reducing, reusing, and recycling.
- 3) *Prioritize our Community's Health and Environment*- The health of our residents and the environment is a priority in decision making to minimize negative impacts and to maximize the benefits.
- 4) *Embrace Social Equity*- Create an easy-to-use system that all residents and the community can understand and participate in.
- 5) *Lead the Change*- Strong leadership is taking ownership, leading by action and being responsible for the waste we produce.
- 6) *Ensure Financial Sustainability*- Financially sustainable solutions that are easy and affordable to maintain by future generations and also help to stimulate economic growth within our community.
- 7) *Make the Future System Transparent*- Future decisions on the implementation of the Strategy will be open, accessible and based on best practices and facts to find solutions that benefit all.
- 8) *Support Development of Community Partnerships*- Working together with local community groups and organizations will help us reach our goals and reduce waste more effectively and efficiently.

Projections

Long term waste quantity and composition projections were developed to identify future system needs (including policies, programs, facilities and contracts). This task identified potential short comings or opportunities in the system's capacity over the duration of the planning period.

With the recommendations in the draft Waste Strategy, Green Lane Landfill is estimated to close in approximately 2040 which provides an opportunity to invest in enhancing and expanding 3Rs opportunities before considering additional landfill disposal capacity.

The following key findings were found during the development of the waste projections:

1. In order to develop a model to forecast waste generation, economic indicators needed to be established that could be correlated with waste generation data. The trends between quarterly residential waste generation, Gross Domestic Product (GDP) and population were found to be statistically significant. Some aspects of the downward trend in waste generation noted from 2001 to 2009 are consistent with what has been found in other cities across Canada and the US, and are likely related to changing lifestyles and other trends, which have been on-going in the economy and also in residential waste generation since 2001.
2. Because the recent data series is less than five years long, it is insufficient for producing long-term forecasts. It is recommended that at least 10 years of observations (ideally without structural breaks) for long-term forecasting purposes. As more observations are collected, the recent data series model can be updated and eventually be the sole model for forecasting waste generation.
3. A series of quarterly waste projections by stream from 2014 to 2021 were developed for a variety of scenarios. These scenarios can be updated with new values for economic indicators and quarterly tonnage data. The City has the opportunity to develop predictive models, which can forecast near term waste generation on a monthly basis. Long-term monthly forecasts can only be produced if monthly economic indicators are forecasted on a long-term basis (more than five years into the future). Relationships between monthly waste generation and monthly economic indicators using the recent data series were also explored. The strongest relationship was found to be between monthly waste generation and monthly city residential building permits. This knowledge can be used to possibly build a "near-term" prediction model, which can predict the amount of waste generated in the upcoming months.
4. Based on projections developed using planning information generated by the City (waste projections from 2022 to 2031 were based on population and household projections obtained from the City of Toronto Planning Division) and projections from 2032 to 2050 (developed assuming a steady state growth rate similar to the growth rate projected for the 2022 to 2031 period), it is estimated that by the end of the planning period, the City could be managing over 1.5 million tonnes annually of material generated by the City's customers.
5. With the implementation of the recommended series of new waste reduction, reuse, recycling, and residual programs and facilities as part of the Waste Strategy, the life of Green Lane Landfill could be extended to at least 2040.

6. Based on the projections developed for quantities of Blue Bin recycling, and barring any changes to the current system, it appears that there is sufficient processing capacity for the amount of Blue Bin recycling collected until the end of the contract period in 2022. Based on the projections developed for tonnages of Green Bin organic materials requiring processing, it is anticipated that the City will require additional processing capacity after 2020 when current contracts with private sector facilities expire.

Gaps & Challenges

This assessment was undertaken to review the current system and identify the primary needs, challenges, and opportunities for the City’s waste management system that are present or may be experienced in the future. This assessment helped to ensure the options identified address key areas where gaps, challenges, and opportunities already do or were anticipated to exist in the future.

A final Gaps & Challenges listing was presented in the September 2015 update report to Public Works and Infrastructure Committee. Table 3 below relists the final list of gaps and challenges. However, as a result of the addition of new options by Public Works and Infrastructure Committee and City Council, additional Gaps & Challenges were identified. These two additions are noted with an asterisk (*) and listed at the end of the table. For each identified gap or challenge, a summary of the challenge is provided. This finalized list is directly related to the final list of options.

Table 3: Final Gaps & Challenges

Gap, Challenge and/or Opportunity	Summary of Challenge
Waste Reduction & Reuse	A challenge facing the City is how to better promote and facilitate the reduction and reuse of waste materials to prevent waste from entering the system and requiring management through collection, processing and/or disposal.
Dufferin Waste Management Facility	The City has a Material Recycling Facility that closed in November 2014 with no current long-term plan for its future use. A challenge facing the City is to examine the function and role of the entire Dufferin Waste Management Facility to identify future roles within the City’s integrated solid waste management system.
Multi-Residential Waste Diversion	A challenge facing the City is the need for increased waste diversion in the multi-residential sector to support its diversion goals, and reduce the amount of material currently being landfilled.
Performance Measures	A challenge facing the City is having a robust group of performance metrics that will accurately measure the waste management system performance and account for changing waste streams, composition, community demographics, etc.
Public Education	A challenge facing the City is being able to reach out to a diverse community to educate its customers on program changes, good waste

Gap, Challenge and/or Opportunity	Summary of Challenge
and Engagement	management practices, and where possible, how to better reduce and reuse.
Regulatory, Control and Role/ Responsibility Challenges	A challenge facing the City is having a system where some waste management responsibilities are outside of the City's control and therefore subject to uncertainty and risk with respect to external parties making changes that can impact the City's system.
Residual Waste Disposal Capacity	A challenge facing the City is to extend the life of Green Lane Landfill and find new waste disposal options to cover the disposal needs for the 30 to 50 year planning period of the Waste Strategy.
Solid Waste Services for the Institutional, Commercial & Industrial (IC&I) Sector	<p>A challenge facing the City is trying to find a mechanism to allow the City to influence greater waste diversion in the IC&I sector for waste materials being generated within the City of Toronto, but managed outside the City of Toronto waste management system.</p> <p>A challenge facing the City is to provide the IC&I sector with options which promote greater diversion and are flexible to accommodate changing waste streams and customer accessibility.</p>
Commissioners Street Transfer Station	A challenge facing the City is the decision needed about the future of the Commissioners Transfer Station (TS); whether it should be relocated or closed. If the facility is relocated, there are options to construct a new facility that may or may not include a residential drop-off facility. If the facility is closed, the City will need to decide how the current services available at the Commissioners TS will be replaced.
Future Role of and Need for Drop-off Facilities	A challenge facing the City is to provide its customers with convenient options which promote greater diversion and are flexible to accommodate changing waste streams and resident accessibility.
Value of Food and Food Waste	A challenge facing the City is the need to reduce waste through 1) decreasing the amount of food that is being wasted, and 2) increasing the amount of food waste that is being captured for diversion.
Waste Financing System	A challenge facing the City is the development of a sustainable financing strategy that will allow the City to move toward greater waste diversion while balancing program sustainability and in support of the need for long-term infrastructure investments.
Waste Recovery Technologies	A challenge the City is facing is diminishing landfill disposal capacity. Alternative processing technologies could divert additional materials from disposal and extend the life of the Green Lane Landfill.
Future Waste Processing	A challenge facing the City is to maximize the use of its facilities and infrastructure, in particular waste processing capacity, and maintain

Gap, Challenge and/or Opportunity	Summary of Challenge
Capacity	sufficient capacity in the system to address its future demands.
Impacts of Energy Costs on the Waste Management System	A challenge facing the City is that the system is heavily dependent on energy, in particular for the collection of waste, and energy costs are expected to continue to increase in the future.
Impacts of Intensification	A challenge facing the City is the impacts of intensification and the changes required to manage additional waste generated by multi-residential housing units with typically lower waste diversion performance records and in areas that are more difficult to collect using traditional methods.
Impacts of a Changing Waste Stream	A challenge facing the City is the constant changing of the waste stream and the ability for programs and infrastructure to adapt.
Construction, Renovation and Demolition (CRD) waste (*New)	<p>A challenge facing the City is to address residential renovation waste and provide its renovator customers with convenient options which promote greater diversion and are flexible to accommodate changing waste streams and accessibility.</p> <p>An additional challenge facing the City is how to better promote and facilitate diversion of CRD materials generated by the CRD sector, which comprises up to 40% of the total waste stream generated in the City.</p>
Enforcement (*New)	A challenge for the City is to maximize the effective and efficient use of its current programs, services and facilities. To date, significant effort and success has been realized through promotion and education; however, there are still areas of the system where voluntary compliance is not at the desired level, requiring strategic consideration of mandatory measures.

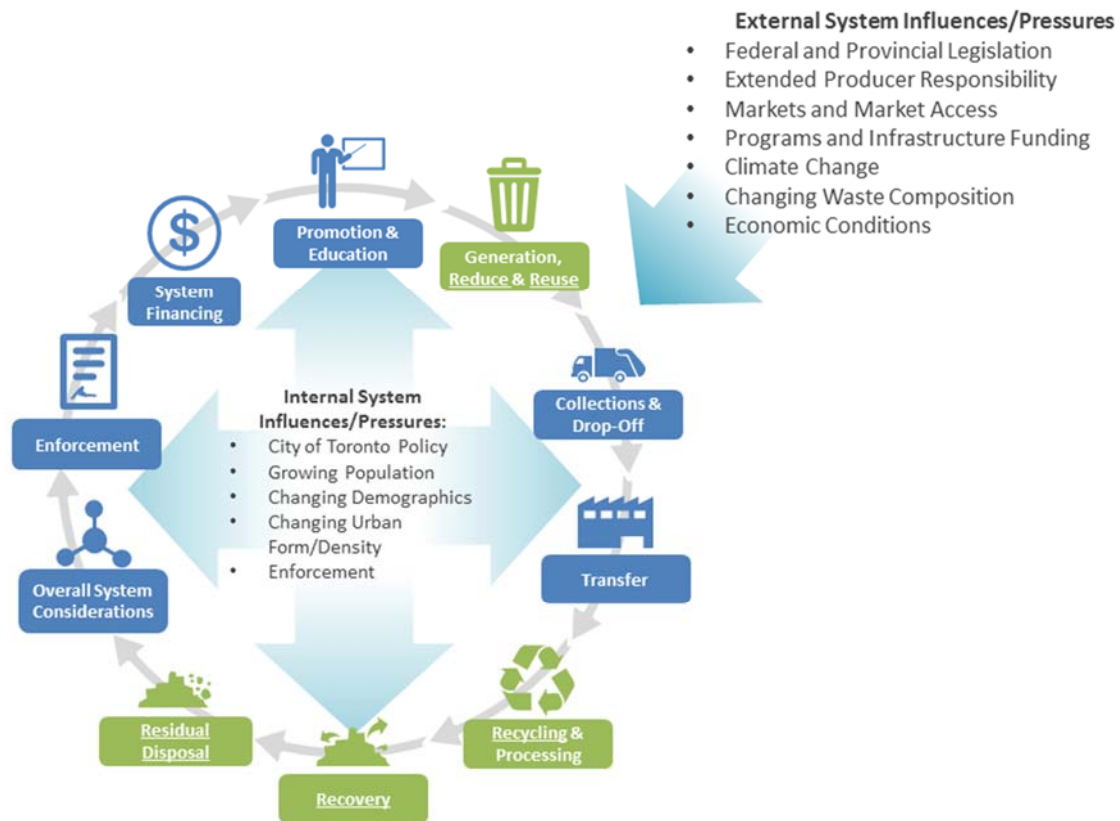
Deliverable 4: Identify Options to Address Needs

Research on a full range of policy and technological options and solutions to address Toronto’s waste management needs for the next 30 to 50 years was conducted as part of the Waste Strategy. The list of potential options covers the full range of the waste management hierarchy (5Rs – Reduction, Reuse, Recycling, Recovery, and Residual Disposal), with a primary focus on the first 3Rs.

As noted in the September 2015 update report to Public Works and Infrastructure Committee, the Waste Strategy list of options have been organized into an integrated systems approach that follows the flow of waste from generation to final disposal. This approach highlights the 5Rs,

follows the hierarchy priority and mirrors aspects of a circular economy or cradle-to-cradle approach. Figure 2 below presents a graphical representation of the integrated systems approach.

Figure 2: Integrated Systems Approach



The options under consideration are classified into the following areas:

1. Programmatic – activities that are more policy and behaviour related with minimal capital investment required for infrastructure;
2. Facility/Infrastructure – includes infrastructure activities, such as adding a new facility or making modifications to the current facility network; and
3. Implementation Tools – will be considered in the context of what is recommended for implementation
4. Future Considerations – not initially required, timing for a more detailed evaluation of the option will be identified

Table 4 below provides a listing of all the options and their classification. The options are classified as Programs (P), Facilities/Infrastructure (F/I), Implementation Tools (IT), or Future Considerations (FC). New options added as a result of Public Works and Infrastructure Committee and City Council motions are noted with an asterisk (*).

Table 4: Final List of Options

System Component	Option Number and Title	Type	Gap, Challenge and/or Opportunity
IT=Implementation Tool, P=Program, F/I=Facilities/Infrastructure, FC=Future Consideration			
Promotion & Education	Option 1.1: Interactive Online Waste Management Tool	IT	<ul style="list-style-type: none"> Public Education and Engagement
	Option 1.2: Environmental Impacts Calculator	IT	<ul style="list-style-type: none"> Public Education and Engagement
	Option 1.3: Expand Social Media Presence	IT	<ul style="list-style-type: none"> Public Education and Engagement
	Option 1.4: Provide Additional Tools and/or Resources to the 3Rs Ambassadors and Other Volunteer Programs	IT	<ul style="list-style-type: none"> Public Education and Engagement
	Option 1.5: Incentivizing 3Rs Ambassadors and Other Volunteer Programs	IT	<ul style="list-style-type: none"> Public Education and Engagement
	Option 1.6: Targeted Group Communications	IT	<ul style="list-style-type: none"> Public Education and Engagement
	Option 1.7: Multi-residential – Workshops and Other Outreach for Buildings Not Receiving City Waste Collection Services	IT	<ul style="list-style-type: none"> Public Education and Engagement Multi-residential Waste Diversion
	Option 1.10: Community Partnership Unit Within Solid Waste Management Services (SWMS) Division	IT	<ul style="list-style-type: none"> Public Education and Engagement
	Option 2.1: Outreach and Education Campaign to Reduce Waste	IT	<ul style="list-style-type: none"> Public Education and Engagement
	Option 9.6: City to Assume Role of Facilitator to Encourage Industrial, Commercial and Institutional Waste Diversion	IT	<ul style="list-style-type: none"> Public Education and Engagement

System Component	Option Number and Title	Type	Gap, Challenge and/or Opportunity
IT=Implementation Tool, P=Program, F/I=Facilities/Infrastructure, FC=Future Consideration			
	Option 9.10: Develop an Advocacy Strategy	IT	<ul style="list-style-type: none"> • Public Education and Engagement
	Option 9.14: Establish a Circular Economy/Waste Reduction Committee to Inform On-going Waste Planning/Implementation Process	IT	<ul style="list-style-type: none"> • Public Education and Engagement
Generation, Reduction and Reuse	Option 2.2: Food Waste Reduction Strategy	P	<ul style="list-style-type: none"> • Waste Reduction & Reuse • Value of Food and Food Waste
	Option 2.3: Textile Collection and Reuse Strategy	P	<ul style="list-style-type: none"> • Waste Reduction & Reuse
	Option 2.4: Sharing Library	P	<ul style="list-style-type: none"> • Waste Reduction & Reuse
	Option 2.5: Support Reuse Events	P	<ul style="list-style-type: none"> • Waste Reduction & Reuse
	Option 2.6: Explore Opportunities for Waste Exchange	P	<ul style="list-style-type: none"> • Waste Reduction & Reuse
Collection & Drop-off Depots	Option 3.3: Stand Alone Drop-off and Reuse Centres	F/I	<ul style="list-style-type: none"> • Drop-off Facilities • Impacts of a Changing Waste Stream • Impacts of Intensification • Waste Reduction & Reuse
	Option 3.4: Develop a Network of Permanent, Small Scale Neighbourhood Diversion Stations in Convenient Locations	F/I	<ul style="list-style-type: none"> • Drop-off Facilities • Impacts of a Changing Waste Stream • Impacts of Intensification • Waste Reduction & Reuse
	Option 3.5: Develop a Mobile Drop-off Service for Targeted Divertible Materials	F/I	<ul style="list-style-type: none"> • Drop-off Facilities • Impacts of a Changing Waste Stream • Impacts of Intensification • Waste Reduction & Reuse
	Option 9.2: Coordinated and/or Alternative Contracts	IT	<ul style="list-style-type: none"> • Impacts of a Changing Waste Stream • Impacts of Intensification • Impacts of Energy Costs on the Waste Management System

System Component	Option Number and Title	Type	Gap, Challenge and/or Opportunity
IT=Implementation Tool, P=Program, F/I=Facilities/Infrastructure, FC=Future Consideration			
Commissioners Transfer Station	Option 4.1: Relocation of Commissioners Transfer Station within the Port Lands Area or Designation of Land for Long-Term Relocation	F/I	<ul style="list-style-type: none"> • Transfer Station at Commissioners St. • Impacts of Intensification • Drop-off Facilities
	Option 4.2: Redirecting Waste to an Existing Transfer Station(s)	F/I	<ul style="list-style-type: none"> • Transfer Station at Commissioners St. • Impacts of Intensification • Drop-off Facilities
	Option 4.3: Procure Transfer Capacity at a Private Transfer Station in Vicinity of the Port Lands Area (if available)	F/I	<ul style="list-style-type: none"> • Transfer Station at Commissioners St. • Impacts of Intensification • Drop-off Facilities
Waste Recycling & Processing	Option 5.3: Future Blue Bin Processing Capacity	FC	<ul style="list-style-type: none"> • Future Waste Processing Capacity
	Option 5.4: Future Green Bin processing capacity	FC	<ul style="list-style-type: none"> • Future Waste Processing Capacity
	Option 5.5: Future Materials Recycling and Other Reuse Related Processing	FC	<ul style="list-style-type: none"> • Future Waste Processing Capacity
	Option 5.6: Dufferin Waste Management Facility	FC	<ul style="list-style-type: none"> • Dufferin Waste Management Facility • Multi-residential Waste Diversion • Waste Recovery Technologies
Materials & Energy Recovery	Option 6.1: Mixed Waste Processing Facility Development	F/I	<ul style="list-style-type: none"> • Waste Recovery Technologies • Multi-residential Waste Diversion • Impacts of Energy Costs on the Waste Management System
	Option 6.2: Mixed Waste Processing with Organics Recovery Facility Development	F/I	<ul style="list-style-type: none"> • Waste Recovery Technologies • Multi-residential Waste Diversion • Impacts of Energy Costs on the Waste Management System
	Option 6.3: Direct Combustion Facility Development	F/I	<ul style="list-style-type: none"> • Waste Recovery Technologies • Impacts of Energy Costs on the Waste Management System
	Option 6.4: Emerging Technologies Facility Development	F/I	<ul style="list-style-type: none"> • Waste Recovery Technologies • Impacts of Energy Costs on the Waste Management System

System Component	Option Number and Title	Type	Gap, Challenge and/or Opportunity
IT=Implementation Tool, P=Program, F/I=Facilities/Infrastructure, FC=Future Consideration			
	Option 6.5: Organics Recycling Biocell or Biomodule	F/I	<ul style="list-style-type: none"> • Waste Recovery Technologies • Multi-residential Waste Diversion • Impacts of Energy Costs on the Waste Management System
	Option 6.6: Refuse Derived Fuel Facility Development	F/I	<ul style="list-style-type: none"> • Waste Recovery Technologies • Impacts of Energy Costs on the Waste Management System
	Option 6.7: Waste to Liquid Fuel Technologies Facility Development	F/I	<ul style="list-style-type: none"> • Waste Recovery Technologies • Impacts of Energy Costs on the Waste Management System
Residual Waste Disposal	Option 7.1: Landfill Expansion	F/I	<ul style="list-style-type: none"> • Residual Waste Disposal Capacity
	Option 7.2: Landfill Mining and Reclamation	FC	<ul style="list-style-type: none"> • Waste Recovery Technologies • Impacts of Intensification
	Option 7.3: Bio-reactor Landfill	F/I	<ul style="list-style-type: none"> • Residual Waste Disposal Capacity • Impacts of Energy Costs on the Waste Management System
	Option 7.4: Landfill Operation Continuous Improvement and Best Practices	FC	<ul style="list-style-type: none"> • Residual Waste Disposal Capacity
	Option 7.5: Adjust Tipping Fees or Customer Base	F/I	<ul style="list-style-type: none"> • Residual Waste Disposal Capacity
	Option 7.6: Purchase a New Landfill	F/I	<ul style="list-style-type: none"> • Residual Waste Disposal Capacity
	Option 7.7a: Securing disposal capacity to preserve long-term landfill capacity at GLL	F/I	<ul style="list-style-type: none"> • Residual Waste Disposal Capacity
	Option 7.7b: Securing disposal capacity for residual management following GLL reaching its approved disposal capacity	F/I	<ul style="list-style-type: none"> • Residual Waste Disposal Capacity
	Option 7.8: Greenfield Landfill	F/I	<ul style="list-style-type: none"> • Residual Waste Disposal Capacity
Overall System	Organics Management		

System Component	Option Number and Title	Type	Gap, Challenge and/or Opportunity
IT=Implementation Tool, P=Program, F/I=Facilities/Infrastructure, FC=Future Consideration			
Considerations: Multi-residential Services	Option 2.7: Community/Mid-Scale Composting	P	<ul style="list-style-type: none"> • Waste Reduction & Reuse • Value of Food and Food Waste • Multi-residential Waste Diversion
	Option 5.1: On-site Organics Processing	P	<ul style="list-style-type: none"> • Waste Reduction & Reuse • Value of Food and Food Waste • Multi-residential Waste Diversion
	Option 5.2: In-Sink Disposal Units	P	<ul style="list-style-type: none"> • Multi-residential Waste Diversion • Impacts of Energy Costs on the Waste Management System
	Waste Collection Methods		
	Option 3.1: Container management	P	<ul style="list-style-type: none"> • Multi-residential Waste Diversion • Performance Measures • Impacts of Energy Costs on the Waste Management System
	Option 9.1: Elimination of Collection Service to Multi-residential Buildings	P	<ul style="list-style-type: none"> • Multi-residential Waste Diversion • Regulatory, Control and Role/Responsibility Challenges
	Option 3.7: Multi-residential Collection using Alternative Vehicles	F/I	<ul style="list-style-type: none"> • Multi-residential Waste Diversion • Impacts of Intensification • Impacts of Energy Costs on the Waste Management System
	Option 3.2a: Alternative Collection Methods for Multi-residential Buildings - Coloured bags	F/I	<ul style="list-style-type: none"> • Multi-residential Waste Diversion • Impacts of Intensification • Impacts of Energy Costs on the Waste Management System
	Option 3.2b: Alternative Collection Methods for Multi-residential Buildings - Vacuum	F/I	<ul style="list-style-type: none"> • Multi-residential Waste Diversion • Impacts of Intensification • Impacts of Energy Costs on the Waste Management System
	Planning, Policies and Enforcement		
Option 1.8. Mandatory Multi-residential By-law	P	<ul style="list-style-type: none"> • Multi-residential Waste Diversion • Enhanced Enforcement Opportunities • Regulatory, Control and Role/Responsibility Challenges 	

System Component	Option Number and Title	Type	Gap, Challenge and/or Opportunity
IT=Implementation Tool, P=Program, F/I=Facilities/Infrastructure, FC=Future Consideration			
	Option 1.9: Updates to Current Multi-residential Development Standards	P	<ul style="list-style-type: none"> • Multi-residential Waste Diversion • Enhanced Enforcement Opportunities • Impacts of Energy Costs on the Waste Management System • Regulatory, Control and Role/Responsibility Challenges
Overall System Considerations: IC&I Services	Option 9.3: Expand City of Toronto Share of IC&I Waste Management Market To Provide Diversion Opportunities to More Commercial Businesses in City of Toronto	P	<ul style="list-style-type: none"> • Solid Waste Services for the IC&I Sector • Impacts of a Changing Waste Stream • Regulatory, Control and Role/Responsibility Challenges
	Option 9.4: Explore Mandatory Approaches to IC&I Waste Diversion	P	<ul style="list-style-type: none"> • Solid Waste Services for the IC&I Sector • Impacts of a Changing Waste Stream • Regulatory, Control and Role/Responsibility Challenges • Enhanced Enforcement Opportunities
	Option 9.5: City of Toronto Exits the IC&I Waste Management Service	P	<ul style="list-style-type: none"> • Solid Waste Services for the IC&I Sector • Impacts of a Changing Waste Stream • Regulatory, Control and Role/Responsibility Challenges
Overall System Considerations: Construction, Renovation, Demolition Services	Option 10.1: Depots, Processing, and Policies to Divert CRD Waste*	F/I	<ul style="list-style-type: none"> • Solid Waste Services for the CRD Sector • Impacts of a Changing Waste Stream • Regulatory, Control and Role/Responsibility Challenges • Enhanced Enforcement Opportunities
	Option 10.2: CRD Material Disposal Ban*	P	<ul style="list-style-type: none"> • Solid Waste Services for the CRD Sector • Impacts of a Changing Waste Stream • Regulatory, Control and Role/Responsibility Challenges • Enhanced Enforcement Opportunities
Overall System Considerations: Incentive-based	Option 3.6: Incentive Based Drop-off System (e.g. reverse vending machines)	P	<ul style="list-style-type: none"> • Impacts of a Changing Waste Stream • Regulatory, Control and Role/Responsibility Challenges

System Component	Option Number and Title	Type	Gap, Challenge and/or Opportunity
IT=Implementation Tool, P=Program, F/I=Facilities/Infrastructure, FC=Future Consideration			
Mechanisms	Option 9.8: Deposit-return System for City of Toronto for Selected Materials	P	<ul style="list-style-type: none"> • Impacts of a Changing Waste Stream • Regulatory, Control and Role/Responsibility Challenges
Overall System Recommendations	Option 9.13: Research, Development, and Innovation Unit	IT	<ul style="list-style-type: none"> • Public Education and Engagement • Impacts of a Changing Waste Stream • Impacts of Energy Costs on the Waste Management System • Multi-residential Waste Diversion • Impacts of Intensification
	Option 9.9: Expanded Blue Bin/Printed Paper and Packaging, Expanded Producer Responsibility Options and Potential Impacts for Toronto.	FC	<ul style="list-style-type: none"> • Regulatory, Control and Role/Responsibility Challenges
	Option 9.11: Green Procurement.	IT	<ul style="list-style-type: none"> • Regulatory, Control and Role/Responsibility Challenges
	Option 9.12: Performance Measures to Define Success and Shape the Future of Waste Management.	IT	<ul style="list-style-type: none"> • Performance Measures
Control, Influence, & Enforcement	Option 9.7: City Explores Mechanisms to Introduce Additional Controls Over Waste Management	P	<ul style="list-style-type: none"> • Regulatory, Control and Role/Responsibility Challenges • Public Education and Engagement
System Financing and Funding	Option 8.1: Fully Independent Utility with No Rebate Program	IT	<ul style="list-style-type: none"> • Waste Financing System
	Option 8.2: Public-Private Partnerships (“P3”) for Major Capital Works	IT	<ul style="list-style-type: none"> • Waste Financing System
	Option 8.3: Debt Financing	IT	<ul style="list-style-type: none"> • Waste Financing System
	Option 8.4: Increase Solid Waste Management Services Customer Base	IT	<ul style="list-style-type: none"> • Waste Financing System

System Component	Option Number and Title	Type	Gap, Challenge and/or Opportunity
IT=Implementation Tool, P=Program, F/I=Facilities/Infrastructure, FC=Future Consideration			
	Option 8.5: Allocating Costs for Waste Management to Applicable Waste Streams	IT	<ul style="list-style-type: none"> • Waste Financing System
	Option 8.6: Alternative Revenue Generation Opportunities	IT	<ul style="list-style-type: none"> • Waste Financing System
	Option 8.7: Performance Based Incentives	IT	<ul style="list-style-type: none"> • Waste Financing System • Performance Measures • Multi-residential Waste Diversion

Deliverable 5: Detailed Evaluation of Options, Identify Recommended Options and Current System Overlay

Deliverable 5 consists of three main components: detailed evaluation of options; identification of recommended options; and the current system overlay. An overview of the detailed evaluation process was provided in the May 2015 and September 2015 update reports to Public Works and Infrastructure Committee. The evaluation process has remained the same and is described briefly below.

As part of the triple bottom line evaluation of the options, specific environmental, social and financial evaluation criteria were developed and underwent consultation prior to being presented and approved by City Council in October 2015. After the approval of the evaluation criteria in October 2015, the project team began to apply the criteria to the list of options.

As previously stated, the full list of options were categorized according to the Integrated Systems Approach. Since implementation tools and future considerations cannot be evaluated, only program and facility options were evaluated. Therefore, in Table 4, only the options categorized with a "P" for program or "F/I" for facility/infrastructure were evaluated. Within each category, like options were comparatively evaluated to determine the recommended options.

For each aspect being evaluated, options received a High, Medium or Low ranking based on the comparative analysis against the other options within the same grouping. The options with the ability to best meet the gap, challenge and/or opportunity received a High ranking and the option that least meets the gap, challenge and/or opportunity received a Low ranking. Although the use of a High, Medium and Low ranking system is qualitative, a quantitative approach was applied where a High was assigned a score of 3, a Medium a score of 2, and a Low a score of 1. These evaluations were then summarized for each individual option.

Following this methodology, the application of the evaluation criteria resulted in a list of evaluated options and their resulting score. In instances where two or more options within a

category received a similar score, and only one option was to be recommended from the category, priorities were applied. As a result of consultation in the Spring and Summer of 2015, and as presented to Public Works and Infrastructure Committee in Fall 2015, the priorities, in order of importance, are as follows: 1. Environmental, 2. Social, 3. Financial.

Figure 3 below provides a graphic overview of the evaluation process presented to Public Works and Infrastructure Committee in May 2015.

Figure 3: Evaluation Process Overview



To ensure consistency in the evaluation, a score card was developed to standardize what constitutes a score of 1, 2 or 3 for each indicator. Table 5 below shows the score card.

Table 5: Score Card

Criteria	Indicators	Low (1)	Medium (2)	High (3)
Environmental Impact/Benefit				
Local Environmental Impact/Benefit	Potential impacts/benefits to land resources.	Potential to contaminate ground surface.	Minimal to no impact/benefit to land resources. No contact with ground surface.	End-product can benefit land (e.g. compost, digestate, biosolids).
	Potential impacts to local airshed.	Significant release of emissions to atmosphere.	Some release of emissions to atmosphere.	Minimal to No release of emissions to atmosphere
	Potential impacts to local water sources.	High potential to contaminate water.	Some potential to contaminate water.	Minimal to No release of potential contaminants to water.
	Potential water consumption requirements.	Large quantities of water required (e.g. for processing).	Some water required for cleaning, staff facilities, etc.	Minimal to No water required.
	Total land required and land use displacement.	Requires additional land for implementation and operation.	Minimal to no additional land required.	Potential to “free up” space/land. Located on existing site/building.

Criteria	Indicators	Low (1)	Medium (2)	High (3)
Regional/Global Environmental Impact/Benefit	Energy and fossil fuel generation / consumption.	More fuel used to haul materials a longer distance (i.e. more consumption). Increased in Power Consumption	Minimal to no energy and fossil fuel generation/consumption.	Energy generated to offset fuel/energy used.
	Greenhouse gas (GHG) contributions.	Option results in increased traffic/vehicles and/or hauling material longer distances. Option results in more methane generating material going to landfill.	Minimal to no additional GHG emissions produced.	Production of biofuel/energy offsets GHG emissions or displaces uses of traditional fuel. Consolidation of facilities/vehicles. Minimal to no vehicle usage. Diverts methane generating material from landfill.
Public Health Impact/Benefit	Potential to impact human health	Potential for adverse impacts on public health.	Minimal to no potential for beneficial impact on public health.	Potential for beneficial impact on public health.
	Potential to impact ecological health	Potential for off-site release of potential contaminants.	Minimal to no potential for off-site release of potential contaminants.	Benefit to ecological health by reducing potential contaminants to the environment.
Potential to Increase Diversion	Ability to recover additional reusable and/or recyclable materials	Minimal to no potential for diversion. (0-1%)	Some potential for diversion. (2-5%)	High potential for diversion. (>5%).
Waste Hierarchy	Consistency with the priorities of the waste hierarchy	Minimal to no consistency with the priorities of the waste hierarchy. Option manages waste with little to no value or beneficial use.	Some consistency with the priorities of the waste hierarchy. Option recognizes resource value of waste and provides opportunities for recycling, materials recovery, and beneficial use of materials.	Significant consistency with the priorities of the waste hierarchy. Option places emphasis on the reduction and/or reuse of materials to prevent their entering the waste stream.

Criteria	Indicators	Low (1)	Medium (2)	High (3)
Social Impact/Benefit				
Approvals Complexity	Complexity associated with approvals and permitting requirements	Large complex multi-stakeholder approvals required (e.g. EA).	Medium complexity approvals required (e.g. ECA or amendment, Zoning by-law change).	No other approvals required.
Potential for Land Use Conflicts/ Community Interruption	Potential for traffic increase/reduction	Increase in potential for additional traffic.	Minimal to no increase/reduction in traffic.	Reduction in potential traffic.
	Potential for litter increase/reduction	Increase in potential for litter generation.	Minimal to no increase/reduction in litter.	Reduction in potential for litter generation.
	Potential odour emissions	Potential for increased odour emissions.	Minimal to no odour emissions.	Reduction in potential for odour emissions.
	Potential noise emissions	Potential for increased noise.	Minimal to no noise emissions.	Reduction in potential for noise emissions.
	Potential for increased vector/vermin	Potential for increased vector/vermin.	Minimal to no potential for vector/vermin.	Reduction in potential for vector/vermin.
Collaboration	Ability to partner with other municipalities/ organizations	No ability to partner with any municipality or organization.	Can only partner with a single group (e.g. municipalities) or limited ability to partner.	Ability to partner with a large number of municipalities or organizations.
Complexity	Program complexity to user	Program is complex and requires significant participant education.	Some complexity with need for some participant education.	Program is very easy to use and understand. Option does not involve user.
Convenience	Ease of participation	Not convenient/easy to access, requires significant effort for customer to participate.	Relatively easy to access with limited effort required for customer participation.	No additional effort to participate. Program comes to user (e.g. mobile depot) or can be used in-home/on-site.
Community Safety	Potential for impacts to community safety	Potential to increase number and type of safety issues	Minimal to no potential to increase number and type of safety issues.	Potential for improvement to community safety
Equity	Potential for unequal impacts/benefits to specific groups	Option could have unequal impacts on residents/stakeholders.	Option is available to everyone equally.	Increased equality when compared to current situation.

Criteria	Indicators	Low (1)	Medium (2)	High (3)
Behaviour Change	Potential to influence or encourage behaviour resulting in sustainable waste reduction choices	Minimal to no potential to change behaviour as user is not connected with option (e.g. recovery facility, or landfill).	Some potential to change behaviour through promotion and education activities, campaigns, strategies.	Significant potential to change behaviour through by-law, act, fees, bans.
Financial Impact/Benefit				
Cost	Estimated net capital cost	Highest capital costs relative to other options.	Medium capital costs relative to other options.	Minimal to no capital costs relative to other options.
	Estimated net operating cost	Increases in operating costs.	Minimal to no change to current operating costs.	Potential to reduce operating costs.
Health Care Cost Implications	Potential to increase health care costs	Potential to result in increased health costs	Uncertain although unlikely that the option will result in increased health care costs	Unlikely to result in increased health costs and some potential for reduction in health costs.
Risk	Potential for contractual risk	Complex option with multiple suppliers/parties.	Limited risk with some reliance on implementation/operation by third-parties. Contract risk is manageable.	Minimal to No contractual risk with implementation/operation with City Staff.
	Schedule risk	High schedule risk. Complex option with multiple suppliers/parties.	Some schedule risk, but manageable. Some risk with timing of approvals.	Minimal to No schedule risk. Option is relatively easy to implement.
	Innovation risk	Significant innovation risk since option involves collection, processing, disposal technology or equipment which is not proven or used in a similar scale as for City of Toronto waste management.	Some innovation risk with some aspects of known collection, processing, disposal technology or equipment which may not have been used at the same scale required for Toronto.	Minimal to No innovation risk, option includes collection, processing, disposal technology or equipment all well known and used at a similar scale as required for City of Toronto.

Criteria	Indicators	Low (1)	Medium (2)	High (3)
Economic Growth	Potential for local economic growth	Minimal to no potential for local economic growth. Option not situated in the City of Toronto.	Some potential for local economic growth. Short term option with limited potential for local economic growth.	Significant potential for local economic growth. Option involves multiple parties which can provide economic growth opportunities. Option results in end-products which require collection, processing, disposal. Option results in beneficial end-product which can be further processed and marketed (e.g. compost, compressed natural gas). Long term option with potential for economic growth in the future.
	Potential for regional/global economic growth	Minimal to no potential for regional/global economic growth.	Some potential for regional/global economic growth on a short term basis.	Significant potential for regional/global economic growth since option utilizes businesses, equipment or technology located in Canada or internationally on a long-term or ongoing basis.
Local Job Creation	Potential for additional local job creation	Option reduces potential for local job creation (e.g. situated outside City of Toronto). Option removes jobs.	Minimal to no potential for local job creation. Option run by volunteers. Option does not provide ability to generate jobs (e.g. reuse events).	Some or significant potential for local job creation. Option creates a number of local short or long-term jobs.

Criteria	Indicators	Low (1)	Medium (2)	High (3)
Flexibility	Ability to accommodate future changes	Minimal to no flexibility. Not flexible – can only be located in certain areas, cannot be re-located easily, specific to certain feedstocks, produces limited end-products. Would require significant permitting/approval changes to accommodate changes. Limited or fixed capacity.	Some flexibility. Somewhat flexible – can handle some changes in material or feedstock, could be relocated or sited elsewhere. Minor amendments required for approvals/permits. Somewhat easy to expand.	Significant flexibility. Very flexible - High ability to accommodate future changes in feedstock, materials accepted, location, produces a variety of products with many markets etc. Easily moved to different locations. Modular option, easily expanded.

The evaluation criteria and priorities were applied to the program and facility options and a series of recommended options deemed suitable for implementation in the City of Toronto are presented in the body of this Staff Report and, to a further extent, in Attachment 1. These recommended options have been combined with the current system to identify all the components (recommended and current) that would form the future waste management system for Toronto. This step pulls together the entire system and considers all options in an integrated system context. This “overlay” represents the future system at the end of the planning period.

Deliverable 6: Waste Strategy Implementation (Roadmap) Development

Once the recommended list of options was compiled and combined with the current system, an implementation plan (or “roadmap”) was developed and incorporated into the draft Waste Strategy. This roadmap documents the implementation of the recommended options and required supporting changes. It also provides a general draft timeframe for implementing the recommendations. A high level overview of the key implementation details is outlined in the draft Waste Strategy (Attachment 1).

The Waste Reduction and Diversion plan for 2016 to 2026, which focuses on waste reduction, reuse and recycling options, was developed and is also presented in the draft Waste Strategy (Attachment 1).

Deliverable 7: Final Waste Strategy

The final deliverable for the project is the preparation of the Waste Strategy document, which provides an overview of the Waste Strategy process, describes the recommended options and

outlines the preferred long term waste management system. A summary of the draft Waste Strategy was provided in the body of this Staff Report and the draft document is Attachment 1. Following the Public Works and Infrastructure Committee meeting on February 29, 2016, Solid Waste Management Services staff will begin Phase 3 stakeholder and public consultation and engagement on the draft Waste Strategy. The consultation and engagement period will begin in late March, 2016 and will conclude by mid-April, 2016. Following the consultation period, the project team will review the feedback received and will incorporate changes as required.

The final Waste Strategy Report will be brought forward for consideration to the Public Works and Infrastructure Committee on June 20, 2016 and City Council on July 12-13, 2016.