



Engagement Series 1 As We Heard It Report – Appendices

June 2021

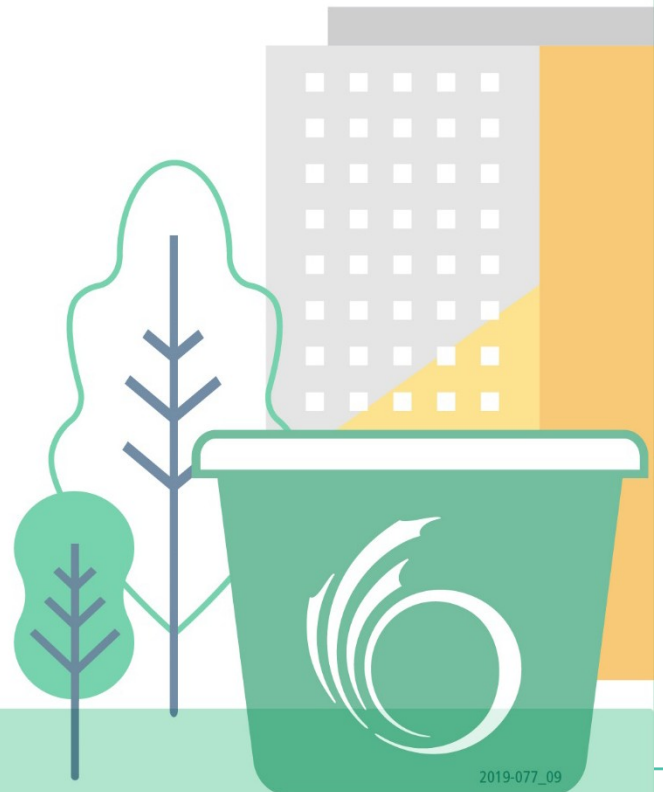




Table of Contents

- Appendix 1 – Key Stakeholder Groups Terms of Reference
- Appendix 2 – Vision Workshops for Key Internal/External Stakeholders
- Appendix 3 – Survey with Key Stakeholder Groups
- Appendix 4 - General Public Online Forums and Ideation Exercises Hosted on Engage Ottawa
- Appendix 5 – Online Dialogue Sessions with Residents and Stakeholders
- Appendix 6 – Internal Staff Survey (Waste Management in the Workplace)
- Appendix 7 – Public Survey on Engage Ottawa
- Appendix 8 – Equity and Inclusion Groups
- Appendix 9 – Dialogue Sessions with Solid Waste Services Operational Staff
- Appendix 10 - Survey Completed by Frontline Operations Staff
- Appendix 11 – Individual Submissions
- Appendix 12 – Validation Workshops with Key Stakeholder Groups
- Appendix 13 – Evaluation Framework
- Appendix 14 – Evaluation Tool Development Workshops with Key Stakeholders



Appendix 1 – Stakeholder Groups Terms of Reference

The following are the terms of reference for the Solid Waste Master Plan’s three key stakeholder groups:

- **City Champions Group (CCG):** The CCG consists of City staff from across the organization that are leaders and subject-matter experts. Members help support the project team by providing input into the Waste Plan based on their respective areas of expertise. The group will also be consulted to ensure the plan’s alignment with other departmental objectives and operational requirements.
- **Council Sponsors Group (CSG):** A standing committee of Council was established and comprises the Chair and Vice-Chair of the Standing Committee on Environmental Protection, Water, and Waste Management; a representative from the Mayor’s Office; and two additional members of Council. The CSG provides vital input, advice, and direction to staff supporting the Waste Plan’s development and will act as a champion to help see the project through to its completion.
- **Stakeholder Sounding Board (SSB):** Consisting of individuals and organizations from across the city who represent a broad range of resident and stakeholder perspectives, including differing demographics and housing types. The SSB provides a forum for mutual learning and enhanced discourse on related topics.

City Champions Group

Terms of Reference

1. Background

The City is in the midst of developing a new Solid Waste Master Plan (Waste Plan) that will establish a planning framework and strategic direction for the management of waste and will consider waste generated from:

- Curbside residential



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- Multi-residential
- Parks and public spaces
- City facilities
- Partner programs and other non-City waste

The Waste Plan will examine the limited life span of the Trail Waste Facility, how the City collects and processes waste and how it will continue to increase diversion rates. It will also look at broader policy issues like single-use plastics, alternative technologies, greenhouse gas emissions, opportunities for the City to lead by example when managing its own waste, with tools such as circular economy programs like green procurement. Funding mechanisms and legislative tools and instruments will also be examined.

The Waste Plan will recommend waste management programs and policies, including the management of post diversion residual waste, which are environmentally sustainable, socially acceptable, and economically viable (the triple bottom line). All existing, as well as new and emerging diversion and disposal technologies and options will be reviewed and considered during this process.

Development of the Waste Plan will include the exploration of opportunities and options for the reduction, reuse, diversion, recovery, and disposal of Ottawa's waste for the next 30 years. The project was initiated with Council's approval of the project *roadmap report* is currently under way and the final Waste Plan will go forward for Council consideration in early 2022. The Waste Plan is being developed using a phased approach broken down as follows:

- Phase 1 – Where Are We At (Q2 2019 to Q1 2020)
- Phase 2 – Where We Are Going (Q2 2020 to Q2 2021)
- Phase 3 – How We Are Going to Get There (Q2 2020 to Q1 2022)

2. Purpose



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The City Champion's Group (CCG) is being established to provide an ongoing mechanism for City-wide collaboration and input into the development of the City's new Solid Waste Master Plan (Waste Plan).

3. Mandate

The mandate of the group is to have leaders and experts from across the organization help support the project team by providing input into the strategy based on their respective areas of expertise. The group will also share operational and other business considerations and feedback as options are considered that will form part of the strategy and may have an impact on their respective operations.

The expectation is that members will work collaboratively to identify synergies between existing projects, strategies, master plans and operational practices in their departments and service areas that pertain to and should be considered in the development of the Waste Plan.

The CCG is not a decision-making body and will not have the authority to vote or commit Solid Waste Services resources. Input will be considered equally alongside feedback received from all other internal and external Waste Plan stakeholder groups.

4. Composition

CCG membership will be by invitation and members and have been chosen to:

- reflect broad representation from departments throughout the City that may be impacted by options being considered in the Waste Strategy;
- have subject-matter experience and/or knowledge to help aid mutual learning and enhanced discourse on related topics;
- will provide an understanding of perspectives related to specific departments and departmental projects, strategies, master plans and operational practices;
- can help build a sense of partnership and collaboration within the City;
- can help Solid Waste Staff understand a range of perspectives; and,



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- will serve as champions and help foster a sustainable waste management culture within their departments.

5. Roles and Responsibilities

CCG members will be responsible for:

- Providing input into the development of the Vision, Goals, Guiding Principles and Objectives for the Waste Plan;
- Contributing input for consideration throughout Waste Plan development;
- Identifying opportunities and synergies between existing projects, strategies and operational practices within their departments and service areas; and
- Providing perspective on waste management and diversion in their respective work areas.

CCG members will also be asked to assist in disseminating information about the project as appropriate within the service areas and departments and will help encourage their team members to take part in engagement opportunities, as required.

The CCG will be supported by a Project Team, consisting of City staff, and external consultants.

6. Project Team

Project Team members will work to provide the CCG with background information, context on the project and its development thus far, and how we will be moving forward with the planning process.

Specific responsibilities of Project Team members are to:

- Send an introductory email explaining what this is and why members were chosen
- Prepare and provide presentation materials for review and discussion



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- Record meeting notes and related documentation
- Arrange for meeting scheduling and logistics
- Respond to CCG questions, input, and recommendations

7. Facilitator

The facilitator will support the work of the CCG through meeting facilitation.

Responsibilities of the facilitator are to:

- Facilitate (chair) CCG meetings
- Enforce norms and ground rules developed by CCG and Project Team members
- Facilitate respectful and productive meetings and group dialogue

8. Term

The CCG will serve until the final Waste Plan has been approved at the end of Q1 2022.

9. Meetings

It is anticipated that CCG meetings will be held throughout the term of Waste Plan development, from May 2020 to February 2021, and meetings will be scheduled every 2-4 months, for a total of between 5 and 10 meetings in total. Notice of any changes to meeting dates/times/frequency will be provided in advance.

Meetings will primarily take place either through an online platform and/or in person and will last between 1 and 3 hours depending on the topic. Pre-meeting documentation will be shared to allow participants the opportunity to educate themselves in advance of the meetings and sessions.

10. Participation Commitment



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It is expected that CCG members attend each scheduled meeting unless arrangements have been made with the Project Lead beforehand. If a CCG member cannot attend a scheduled meeting, they are asked to send a designate that is equally qualified to provide necessary input on the subject being discussed at each meeting.

If a CCG member feel it is appropriate and necessary to bring/designate participation to another colleague with specific subject matter expertise to attend a meeting based on the topics for discussion, it is asked that the Project Lead be advised of such beforehand.

11. Meeting Minutes and Reporting

A written summary of the discussion and comments from each meeting will be prepared by the Project Team and approved by CCG members at their subsequent meeting. Meeting minutes will describe highlights of the meeting and recommendations or options. CCG activities and input will be summarized and included in a public participation report.

12. Conduct

- All CCG members are equal, and their input will be valued equally (regardless of their organizational positioning).
- CCG members will respect the contributions of other members and make all efforts to understand alternative viewpoints.
- CCG members will endeavor to work collaboratively, and to engage in open, honest dialogue.

Council Sponsors Group

Terms of Reference

Purpose/Role

The Solid Waste Master Plan Council Sponsors Group will:



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- Provide vital strategic input, feedback, advice, and guidance to staff in developing and implementing the Solid Waste Master Plan
- Represent the public and ensure staff are aware of current thinking and concerns of the community as work proceeds on the plan's development
- Be informed enough to be council experts on the proposed options and recommended Solid Waste Master Plan

Membership

The Solid Waste Master Plan Council Sponsors Group shall consist of the following members:

- Councillor Scott Moffatt
- Councillor Shawn Menard
- Councillor Laura Dudas
- Councillor Eli El-Chantiry
- Danielle McGee

Support

The Solid Waste Master Plan Council Sponsors Group will be supported by:

- Long-Term Planning Branch, Solid Waste Services
- Business Support Services, Business and Technical Support Services
- Corporate Public Policy Advisor, City Manager's Office

Procedures

Any recommendation developed by the Solid Waste Master Plan Council Sponsors Group will require Committee and Council consideration.



Staff Role

City staff will facilitate meetings and lead work on the development of the Solid Waste Master Plan. Meetings will be scheduled based on the interests and needs of Councillors and staff.

Staff will provide the Council Sponsors Group with all relevant content required for upcoming meetings in the form of briefing notes, at least one week prior to each Council Sponsors Group Meeting.

Staff will respond to Council Sponsors Group requests for supplementary information pertaining to the project within two weeks of the request.

Stakeholder Sounding Board

Terms of Reference

1. Purpose

The Stakeholder Sounding Board (SSB) is being established to provide an ongoing mechanism for input to the Project Team at key points in the development of the Solid Waste Master Plan (Waste Plan) and to help ensure resident and stakeholder feedback is incorporated into the Waste Plan wherever possible.

2. Mandate

The SSB will be a forum to allow for input and perspectives from key stakeholders with an interest and/or expertise in solid waste management. The SSB is not a decision-making body and will not have the authority to vote or commit City resources. Input will be considered equally alongside feedback received from all external Waste Plan stakeholder groups.

3. Level of participation - Involve

The International Association of Public Participation (IAP2) provides a Spectrum for Participation that Staff reference to help establish a common understanding of the level of participation of the various stakeholders involved in Waste Plan development.



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Engagement with the SSB is at the “Involve” level on the spectrum.

Involve – Stakeholder engagement goal: To work directly with stakeholders throughout the process to ensure that stakeholder concerns and aspirations are consistently understood and considered.

Involve - Promise to Stakeholders: We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.

The Project Team will be responsive to concerns but will not ask SSB members to formally approve or disapprove any actions.

4. Composition

SSB membership will be by invitation and members will be chosen that:

- reflect the concerns of residents and stakeholders
- can help build a sense of partnership with the community
- can help Staff understand a range of perspectives
- have subject-matter experience and/or knowledge to help aid mutual learning and enhanced discourse on related topics
- will provide an understanding of perspectives related to specific neighbourhood circumstances and housing types
- will provide an understanding of perspectives related to different demographics

5. Responsibilities of SSB Members

SSB members will be responsible for:



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- Providing input into the development of the Vision, Guiding Principles and Objectives for the Waste Plan.
- Contributing input for consideration by the Project Team throughout Waste Plan development.
- Sharing technical advice and knowledge to help provide a well-informed planning process.
- Reviewing engagement and communication approaches developed by Engagement Consultants and Staff.
- Reviewing feedback received from residents and stakeholders and suggesting ways feedback can be incorporated into the Waste Plan.
- Suggesting ways to ensure residents and stakeholders are aware of project process and how engagement feedback is being used.

SSB members will also be asked to assist in disseminating information about the project and encouraging their associates/group members (where relevant) to take part in engagement opportunities. All residents and stakeholders will be made aware of the SSB and that part of the SSB purpose is to help ensure feedback received through the engagement process is incorporated into the Waste Plan.

The SSB will be supported by a Project Team, consisting of City staff, and external consultants.

6. Project Team

Project Team members will work with the SSB in order to contribute background, context and subject matter expertise and explain the processes and considerations involved in Waste Plan development.

Specific responsibilities of Project Team members are to:

- Conduct a start-up phone interview with SSB members



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- Prepare and provide presentation materials for review and discussion
- Record meeting notes and related documentation
- Arrange for meeting scheduling and logistics
- Respond to SSB questions, input, and recommendations

7. Facilitator

The facilitator will support the work of the SSB through meeting facilitation.

Responsibilities of the facilitator are to:

- Facilitate (chair) SSB meetings
- Enforce norms and ground rules developed by SSB and Project Team members
- Facilitate respectful and productive meetings and group dialogue

8. Term

The SSB will serve until the final Waste Plan has been approved at the end of 2021.

9. Meetings

It is anticipated that SSB meetings will be held, in-person, throughout the term of Waste Plan development, from April 2020 to December 2021 and meetings will be scheduled every 3-4 months. The meeting schedule for 2020 will be set at the outset of the study. Notice of any changes to meeting dates/times will be provided in advance.

Length of meetings shall not exceed three hours unless agreed upon by a majority of members present through a motion and vote. Meeting schedule and agendas will be set by Staff.

10. Quorum



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A quorum is a majority of the SSB membership and is required to conduct SSB business. The member organization may identify an alternate, who can attend meetings if the primary SSB member cannot attend.

11. Meeting Minutes

A written summary of the discussion and comments from each meeting will be prepared by Staff and approved by SSB members at their subsequent meeting. Meeting minutes will describe highlights of the meeting and recommendations or options. SSB activities and input will be summarized and included in a public participation report.

12. Conduct

- All SSB members are equal and their input will be valued equally.
- SSB members will respect the contributions of other members and make all efforts to understand alternative viewpoints.
- SSB members will endeavor to work collaboratively, and to engage in open, honest dialogue.

13. Remuneration

SSB members are volunteer appointments and receive no remuneration.

14. Membership

Algonquin College

CAFES (Community Associations for Environmental Sustainability)

Canadian Association for Retired Persons (CARP, Ottawa Chapter 26)

Carleton University

Dunrobin Community Association



Eastern Ontario Landlord Organization

Envirocentre

Environmental Stewardship Advisory Committee (ESAC)

Federation of Citizens' Associations of Ottawa (FCA)

Greater Ottawa Home Builders Association (GOHBA)

National Capital Commission (NCC)

Ontario Waste Management Association

Osgoode Ward Business Association

Ottawa Coalition of BIAs

Ottawa Community Housing (OCH)

Recycling Council of Ontario

Social Planning Council of Ottawa

University of Ottawa

Waste Watch Ottawa



Appendix 2 – Vision Workshops for Key Stakeholder Groups

The following are the minutes from online Vision Workshops held from May 4th to May 14th, 2020, with the following key stakeholder groups: The City Champions Group; the Stakeholder Sounding Board; and key Solid Waste Services staff. Staff also met with the Council Sponsors Group to review input from key stakeholder groups and obtain comments.

Solid Waste Services Staff

Solid Waste Staff Group Workshop - Notes

May 7, 2020

- Opening remarks from Rachael Jones (RJ) with instructions and recording disclaimer
- Shelley McDonald welcoming remarks.
- Nichole Hoover-Bienasz (NHB) introduces ‘think big’ thanks the team for helping put together such a successful phase 1 – reiterates how crucial this group will be for phase 2
- NHB proceeds with technical presentation.

Greg Jodouin (GJ) outlines the activities of the session:

1. Defining the Challenge Statement
2. Individual – write down 4 statements that capture their hopes regarding Ottawa’s WM of the future (2052)
3. Group – Breakout rooms to discuss ideas and decide on 6-8 statements to bring to the larger group
4. Vision Components



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GJ – Exercise 1 – Current State Discussion – This is not meant to be future-looking but a comment on current state, which will be used to develop a baseline. Not solution-focused, but still looking to describe why status-quo is not acceptable.

GJ - Exercise 2 – Everything is on the table, what should/could 2052 look like? Provide 4 statements. Breakout into smaller groups to discuss ideas.

GJ - Exercise 3 – Grouping 2052 ideas into a vision

Discussion on the statements provided, some of the more liked were; safer way of collecting waste – no longer a hazardous job for collections. Waste to Energy Facility.

Group discusses how all statements are related to a healthier environment.

*****NHB Closing Remarks*****

What we heard

What do you want Ottawa to look like in 2052 concerning waste management and waste-related issues?

- High operational efficiency
- Full participation, high diversion
- Landfill gas – finding alternative uses for it (biogas; RNG; fuel our fleets; etc)
- Reduce all we can, reuse what is left, minimize waste to landfill
- Environmentally responsible waste in a user-friendly system
- Turn waste into wants
- No more plastic bags
- Reduce packaging



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- Higher quality appliances and products in the marketplace (i.e., microwaves now are designed to have a short life span, whereas they used to be designed to last 20+ years. Or you can go to Walmart and buy a coffee pot for \$10 and after a year just throw it out and replace, versus repairing it for \$1 or \$2)
- Trail Road Landfill still open in the year 3000
- Incineration = “in”
- Landfill bans in place on items like C&D
- Waste diversion at par between multi-residential and curbside customers
- Life of the landfill is now beyond year 3000 – more capacity due to extensive waste diversion programs
- Introducing new technology - Incineration – waste to energy is part of waste management
- Landfill bans; enforce specific materials from the landfill e.g., construction/demolition material
- Moving away from single use society – materials now have a shorter lifespan.
- Long-term goal – getting rid of lower grade material so it doesn’t end up at the landfill
- Waste diversion rates are the same for multi-res and curbside sectors
- Full or 100% participation in waste diversion programs and high diversion rate
- Optimal practices for all of solid waste – review how we are doing business – look at ‘right equipment’
- Find solution for landfill gas – e.g., using landfill gas for fueling city vehicles
- Reduce all we can, reuse what is left, minimizing impacts, and maximizing resources
- Turning waste into wants – rethinking waste solutions



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- Environmental responsibility – in a user-friendly system
- Phasing out plastic bags – reducing packaging
- Reuse repair approach rather than discarding
- Reduced landfill footprint, like to see waste as a valuable resource, commodity for renewable products
- Clean environment, reduced pollution
- Fair value for reliable service, excellent value and taxes are reflective of a good service, taking advantage of all best practices.
- Transparency, data, and measurements – systems connected to be able to provide measurable and meaningful for informed decision making.
- Bag limits
- Organics collection mandatory
- No multi-residential collection
- No large items
- Liked to see the City have a sound financial plan
- Public curbside diversion to include organics. Credit system/chips for diversion at the curbside
- Landfill still open – we can still manage the residuals from whatever processing is in place.
- Producer packaging looking different from today
- Like to see organics be more of a commodity and application for beneficial re-use.



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- Better information readily available to allow people to make informed choices
- Circular economy
- Waste as a resource/commodity for renewable products
- Informed at the front and back end for making choices and following best practices.
- Public engagement, transparency, reporting measures and producer responsibility

Stakeholder Sounding Board

Stakeholder Sounding Board Workshop – Notes

May 11, 2020

- *Rachael intro w/ disclaimer and instructions*
- *Shelly Intro*
- *Nichole and Team Intro*
- *Intro of Stakeholders*
- *Nichole describes goals and benefits of having this diverse group at the table and presentation*
- *Rachael continues presentation with timelines for communication and engagement*
- Question: Can the surveys be shared with their individual groups? Information that is coming out of this, can they share that with their people as well?
- RJ – Yes you can share. The Surveys will be short, so please do share with your groups.
- NHB – refers to Engage Ottawa, has all Tech info which is there to be shared. Encourages to share with each group. Engage as much as you can, want to hear everything possible.



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- Question: Who are the other stakeholder groups?
- City Champions – Reps from different departments.
- Council Sponsor Group – 4 councillors and a rep from City Manager’s office
- SW Staff – Act as SMEs
- RJ will send out more information on these groups after the meeting.
- NHB – councillors are from a spectrum of areas.

GJ – Workshop Begins. 1. Current state and 2. Forward Looking activities. Only directions are that status quo is not acceptable and they want to extend the life of the Trail Rd. facility.

Everything is driven by the vision... “onion” example. “north star” Example.

Exercise 1 – One Statement from each person on the white board on current Challenges

- Respondent 1 – Explaining our collection system to new Canadians shows how it complicated it is.
- Respondent 2 – Simplified system and strategies and ways to help with waste
- Respondent 3 – Costs do not go up. MR costs are going up by 60% - minimize cost increases for compliance
- Respondent 4 – Increasing population, increasing waste per household. Ensure efficient disposal capacity
- Respondent 5 – Balance between user/resident v sorting at site. Ease of use and cost
- Respondent 6 – too much emphasis on recycling and not on reducing. Recycling takes too much energy and cost and it isn’t very effective.



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- Respondent 7 – ‘No silver bullet’ Unique municipality in that we have capacity Trail Rd as a City. Ottawa has not pursued any diversion methods that exist elsewhere. P&E. Existing system can become better.
- Respondent 8 – Procurement – circular economy. ‘Away from home’
- Respondent 9 – Challenges the notion that we are producing more garbage than years previous.
- Respondent 10 – Emphasis on recycling needs to go. Reduction is what matters. PE is what will matter here, and not just for residential but ICI as well.
- Respondent 11 – Reduction emphasis should be almost exclusive. Beyond PE and also use legislative tools including ban on plastics – broader than Feds. Pay per throw
- Respondent 12 – nowhere to get rid of HHW, and if there is – it is v inconvenient
- Respondent 13 – balance between operational capability and social behaviour
- Respondent 14 – Costly for small business owners to manage garbage. Echoes reduce component. Better PE needed for residential.
- Respondent 15 – Contamination rates, PE, behavioural change. Review of recycling.
- Respondent 16 – need to make it easier for people to comply

Exercise 2 – SWMP of your dreams – take some time to write down 4 ideas, then we will share with break out group.

Breakout sessions were completed, but time ran out before they could be shared with the larger group.

Nichole’s closing remarks



City Champion's Group

City Champion's Group Workshop - Notes

May 14, 2020

Greg Jodouin outlines the 2 activities of the session:

1. Defining the challenge statement
2. Factors to consider when developing the strategy

GJ – Exercise 1 – One statement per service area to be included in the SWMP

- Consider infrastructure renewal, operations, maintenance, and finance
- Increased opportunity for diversion
- Public engagement participation is key
- Reducing environmental impacts
- Dog waste must be managed
- Innovative programs to help reuse and recycle
- Plastics are a large concern
- Sustainability through diversion – can only be achieved through large scale participation
- Take into consideration the 4 sustainability factors (economical, social, financial, and cultural)

GJ - Exercise 2 – Break-out Sessions about Vision: in 2052, what these statements say should be visible/clear



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“IN 2052 – you’re teleported to that year and you’re looking around – write 4 statements to describe what you see if the SWMP of your dreams was adopted and executed”

- Very little waste going to the landfill
- Ottawa is a top-notch clean City
- Zero-waste generation
- Circular economy
- Waste is a renewable energy source
- No litter
- No single use plastics
- Organics waste used to beautify public spaces
- All residents participate in social change
- Cultural shift in how the community looks at waste
- Full culture shift to a lighter footprint
- Easy and convenient waste system
- Neighbourhoods designed with waste management/collection in mind
- We are a G7 leader as a municipality

Nichole with closing remarks and next steps.

CCG Breakout ideas

- Ottawa is a G7 leader as a zero-waste municipality
- Education is widespread, continuous, and consistent messaging



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- Culture shift in the way we as a community we look at waste
- Ottawa leverages all existing proven technologies in waste reduction; Landfills are now antiquated last resorts
- Full culture shift to a lighter footprint - Zero-waste generation by Ottawa residents and businesses, strong circular economy, and no litter.
- Neighbourhoods designed with waste collection in mind and a top-down approach to develop waste collection strategies. Design includes effective receptacles, that can be sorted and give people the opportunity to go through to find any materials of value.
- On-site compost – reduce GHGs, Organic waste is being used to beautify our public spaces. Glass and metal are all that is recycled – this is a plastic free world. No roadside debris.
- Waste to energy

Waste as a resource

- Fiscally responsible (i.e., RNG saves costs; can also be sold and be a source of revenue)
- Waste is a renewable energy resource, e.g., converting waste in methane that can be reused to power plants (i.e., ROPEC); regenerating any gases or carbons to charge buses (full on electric system); All organics need to be converted to gas (to meet demand for energy in the city) – RNG

Aspirational

- Solid waste is no longer viewed as problem - Ottawa is known as the cleanest city in North America attracting international tourists to see how clean it is
- Ottawa is known globally for waste diversion and waste management technology - The international institute of waste management is established in Ottawa – has a great reputation for excellence



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- Waste-free clean environment (no single-use plastic)

Consumer/Producer Behaviours

- Waste reduction practices are embedded at the retail level (packaging and more; durability; 5Rs)
- Waste reduction practices are commonplace in Ottawa’s households and with consumers (starts at the retail level)

Technology and Innovation

- Innovative experimentation in waste management (re-use and renewable) technology is trialed and embraced

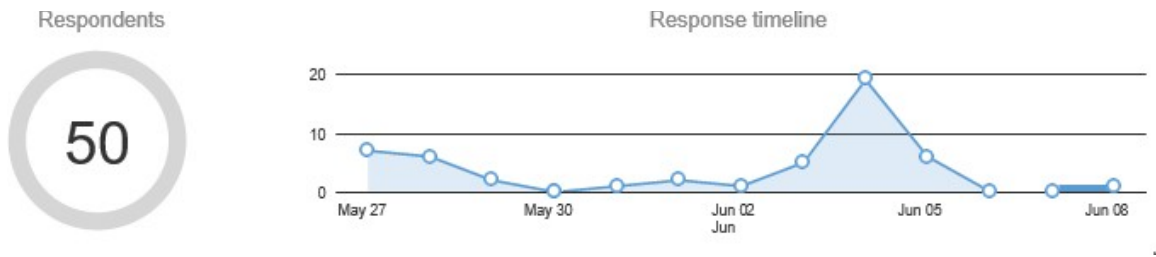
Diversion are increased / Leadership / Policy and practices

- Sophisticated recycling practices are discussed (aspirational, discussions are more than baseline recycling)
- Climate plan considerations
- Designed obsolescence is a criminal offence
- Waste can be diverted such as food waste



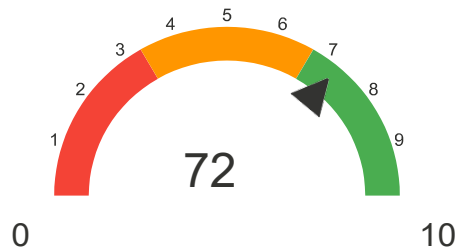
Appendix 3 – Survey with Key Stakeholder Groups

The following are the responses to a survey sent to members of the City Champions Group, the Stakeholder Sounding Board, and key Solid Waste Services staff, to obtain input on a list of potential guiding principles for the Waste Plan. The guiding principles were drafted by staff following Councillor engagement and a municipal scan of waste plans in other jurisdictions, including internationally. In total, 50 individuals participated in the survey.



How important are the below guiding principles to you? (where 1 is not important and 10 is very important)

Aim for zero-waste (where next to no waste is sent to landfill or incineration)

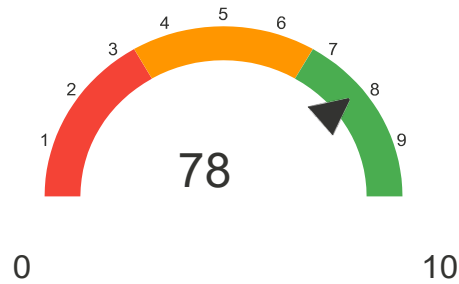




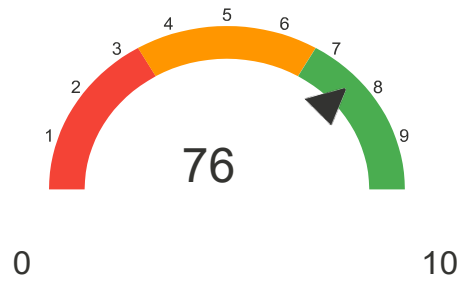
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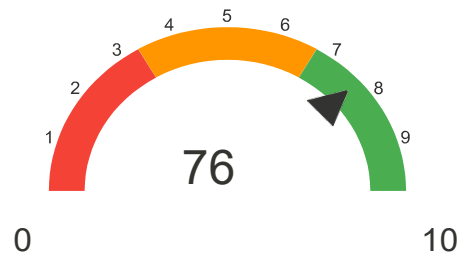
Preserve landfill space (so that the Trail Road landfill does not fill up fast)



Manage waste locally (to reduce the environmental impact of transporting materials)



Consider local economic growth (consideration of options that will create local jobs and encourage investment in the community)

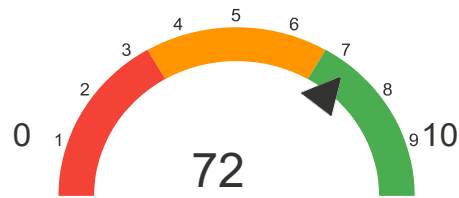




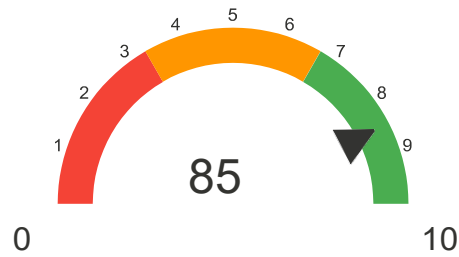
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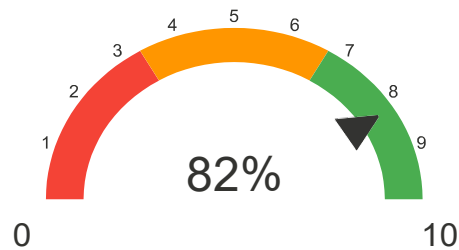
Ensure the system is affordable (consider potential increase in costs for households or businesses)



Encourage behavioural change (so that current and new programs and services are used to their full benefit)



Consider impacts on public health (cleaner air, less litter)

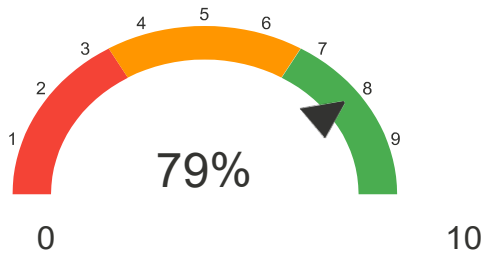




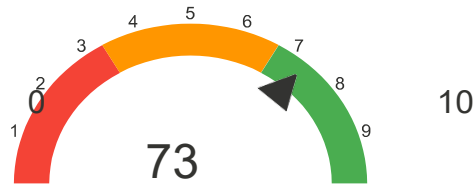
Solid Waste Master Plan

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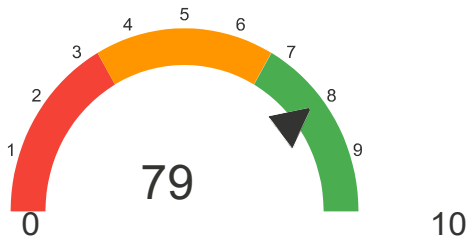
Be customer focused (make the system user friendly and ensure focus on resident and stakeholder satisfaction)



Demonstrate leadership (become a leader in the waste management industry)



Lead by example (find opportunities to reduce and more sustainably manage the waste the City generates as an organization)

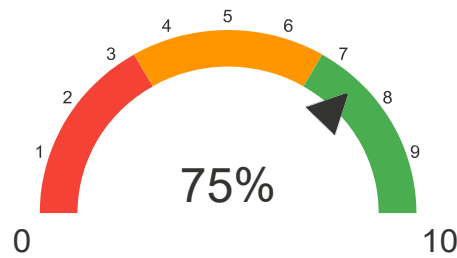




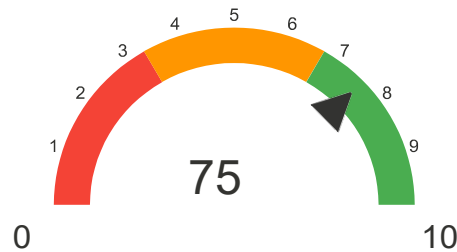
Solid Waste Master Plan

Plan directeur des déchets solides

Use innovative and emerging technology to improve operations (such as Waste-to-Energy and chemical processing)



Foster partnerships (collaborate with external stakeholders, including other levels of government and large and small organizations, to advance waste management practices and services provided to the community)



Align with other City programs, policies and plans (such as the new Official Plan and Climate Change Master Plan) to ensure consistency and consideration of goals and objectives in other departments





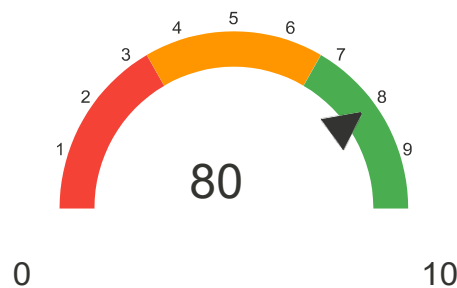
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Incorporate environmental stewardship (including clean growth, consideration of ecosystems, building safe, secure and sustainable communities and consideration of climate change impacts)



Shift to a circular economy (an economy that aims to minimize the use of raw materials, extract the most value possible from resources and keep products in use wherever possible)



Is there anything you feel we have missed?

- 'Educating the public' - can't emphasize that enough. Business & Residential Development community needs to also buy-in or be dragged into taking a more active role. It's not only the City's responsibility to reduce waste.
- I feel we must take a systematic approach really look at the opportunities. The collection system as it currently stands is really broken. Should we move to single stream collection with a sorting solution all of a sudden, the land fill numbers are



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- reduced exponentially.
- Excellent capture - seems all are priority
 - Ensure that waste management standards are proportional, practical, and tailored to the realities of infill development.
 - Ottawa will eventually and inevitably exhaust all its landfill and disposal capacity, it's just a question of when. So, adding new disposal capacity needs to be considered.
 - Policy should be corporate and community wide. Circular procurement should be used to support and transition to a circular economy which will address economic, social, and environmental policy objectives simultaneously
 - Need to focus on proven technologies. Innovative and emerging technologies are not necessarily proven and could be costly to the City. Aim for 1 generation behind the latest technology. Being on the 'bleeding edge' is risky.
 - Influence province to enact regulations to make businesses pay for the waste they generate
 - Reverse poor past decisions e.g., small, main street business recycling - paying twice of a service they don't receive

Please let us know if you have any other comments

- It is critical that the City does NOT embark on waste-to-energy incineration in order to reduce landfill.
- Don't support shock value, but some measure of it might have to be used to get public buy-in.
- The first item asks about two things. I feel more strongly that waste does not go to incineration than I do about it not going to landfill.



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- Why is incineration a bad thing. What if this is a leading technology and can scrub contaminants. Ensure that we are hearing from different parts of the community and not just special interest groups.
- City should be using proven technology. City shouldn't use taxpayer's money to gamble with emerging technologies.
- I agree on collaborations but P3's are not always cost effective. Sourcing effective waste treatments through investigations into other public and private sector organizations but managed solely by the City. Full control must be maintained by the City of Ottawa to ensure environmental targets are met within all aspects of City's processes including Planning, Transportation, facilities management, etc.
- I wonder if our guiding principles / 'vision of the future' should include more specifically engaging with youth - our future audience and resident population e.g., at schools



Appendix 4 – General Public Online Forums and Ideation Exercises Hosted on Engage Ottawa

The following is the detailed input provided by participants in forums and ideation exercises hosted on the City of Ottawa's online engagement platform, Engage Ottawa, from May to August 2020. Answers to any questions below can be found on the Solid Waste Master Plan page on Engage Ottawa.

Engage Ottawa feedback

Ideas

- Recyclable materials - Change your purchasing habits
- When you make a purchase of an item that seems to be made of non-recyclable material, maybe look to find one that is? It may cost a little more but may also "unfill" the landfill :)
- Less plastic packaging in stores
- Stores should have more non-plastic packaging options, like paper and carton
- Garbage pickup on-demand
- We should have an option to arrange garbage pickup on-demand. There should be a fee associated with ordering a off-schedule pickup, but it will allow for better garbage disposal for special circumstances.
- Burn whatever you can...
- the City can take this as a suggestion for controlling city waste, since there are reliable and effective systems in Canada and around the world that can turn waste into power while at the same time reducing the impact on the environment and avoiding a toxic waste dump.



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- Figure out ways of re-using plastic packaging before sending it to the blue bin
- As we (unfortunately) accumulate a lot of plastic packaging (e.g., fruit and vegetables packaging), we might want to think about how it can be re-used for creative purposes before tossing it into the blue bin.
- Support local companies focused on innovating waste reduction technology and implementation of circular systems
- The city has innovative and world class private companies focused on developing waste reduction technologies. The City of Ottawa must endorse, support, promote and partner with such companies to put Ottawa on the map provincially, nationally, and globally as leaders in this space. Partnering with such companies to implement proof of concept solutions in the city will demonstrate dedication to the SWMP.
- Incentive for minimizing volume of residual garbage: pay service fee for the volume and frequency of pickup in standardized garbage cans
- Use incineration rather than landfill as a primary means of waste management (like in EU). Modern incinerators produce little pollution.
- Before buying something, I ask myself if I actually need it.
- Many things that we buy, we can actually do without. I also: - Shop for previously-loved books and clothes; - Ask if a family member has something before buying it; - "Shop" from my fridge; - Bring my own grocery bags to the store (and bag my own groceries, so that the checkout clerk doesn't have to touch my bags); - If a retailer is using too much packaging, I give them feedback via email or customer survey; - Use things until they are worn out, then try to repair/mend them; - Educate my peers and family members; - Participate in this consultation in the hopes of giving the city evidence that people want change.
- Bag tags for extra garbage bags



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- Garbage in Ottawa gets picked up every other week, with a limit of 6 items that could be placed outside. When I lived in Kingston, garbage was picked up every week, but limited to one garbage bag per household - any additional bags had to have special tags on them that had to be purchased. So, maybe something similar could be implemented in Ottawa - the principle would be to reduce the limit of garbage bags/items that can be placed outside, and have people purchase bags tags if they want to be able to put more garbage out. It could potentially also apply to blue bin or black bin items - if the amount of recycling items exceeds what the bins can hold, then there needs to be a fee associated with putting more items out. The general goal of this scheme would be to incentivize reducing waste output from households.
- When I was in elementary school, we were taught this relatively new thing called recycling. I don't remember the specifics, but it was along the lines of If you see a 1 or 2 in the recycling triangle then recycle it, if you see a 3-4-5 then it's not recyclable here. Nothing about a list of 50,000 items.
- Better design for the 'Waste Explorer' app
- There are over 900 entries in the app, some of which are oddly specific or similar to existing entries (e.g., what's the difference between aluminum containers and aluminium cans?). Adding photos or pictures for each description would make it easier to figure out what category something is in.
- High-rise green bins
- If it isn't already being made part of the building code, for future high-rise buildings developers should be made responsible for designing into the building a way for green bins to work. It should be part of the permitting process, so that construction doesn't even start until something has been planned.
- Permanent hazardous-waste disposal location
- When I bought my place, there were some old chemicals and paints leftover from the previous owners. It took me a couple of years to get rid of them, because the hazardous



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waste disposal depots are only open for one or two days a month during the summer and always in different locations, so you really need to plan ahead to use them. The City should explore having two or three permanent drop-off locations. This could be at existing City facilities (including the Dump), or be partly contracted out to industry, i.e., have a contract with a Lowes/Home Depot/Rona location to operate a hazardous waste collection point, and then the City picks stuff up once or twice a week. Many home-improvement stores already take back some or all of the paints/chemicals that they sell, so they might already have some of the capacity/training to handle this.

- In the context of the COVID pandemic, I felt uncomfortable picking up litter (e.g., licked straws and cups)- please reduce litter for COVID!
- "Pay-per-use" garbage pick-up
- The French town of Roubaix has a system, where the households' garbage bins are equipped with a chip, which is sensed by the garbage pick-up truck. Depending on how often garbage pick-up is required for this household, the amount of taxes to pay is adjusted. It sounds like a good incentive to reduce waste generation.
- Start collecting scrap metal from homes as part of the diversion effort. Metal is heavy so the landfill tonnage will be reduced immediately
- Separate wood from waste
- Go to trail road almost any time and people are dumping wood pallets. These and other woods can be shredded or sold or burned rather than buried. Ensure pressure treated are extracted first. Some manual separation would cost but would save expensive landfill.
- Make garbage bags more expensive so people are more incentivized to recycle / learn about recycling.
- Expand yellow bag program to businesses in business plazas, regardless of whether all the businesses in the plaza want to join.



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- Some businesses would love to recycle but can't as plaza owner does not want to get recycling bins due to the extra cost, and not all businesses are on board to join the yellow bag program.
- Education: Elementary and Secondary
- As an education component, I would have school field trips to visit the City of Ottawa's waste and recycling facilities. From an engineering, logistics, management point view. This could easily be tied into the science, technology, and math curriculum. Hopefully, that will plant the seed in their brains to think twice of purchasing anything that will ultimately end up there. I saw Councillor Darouze post photos from a visit to one facility and I was blown away.
- Cradle to Grave Products
- This is more of a big picture initiative. ALL manufacturers of ANY product are required to pickup their products when the product is past its useful life. In the same way Amazon can delivery a package efficiently to your home, that exact same technology solution can be used for pickup and delivery back to the manufacturer. 2 Benefits 1) This would force manufacturers to create 360 products 2) Prices will increase so consumers will think twice of buying something they most likely don't need.
- Recycling required for construction sites
- I work in the industry and we contribute so much landfill waste. I've always wondered why there's never any large bins on construction sites. The tonnage must be massive.
- Incinerate anything that isn't compostable and generate electricity
- Make clear garbage bags mandatory for both residential and business collection.
- If the garbage contains too much organic or recyclable material, pick up of the bag would be refused. This could be implemented with a window to allow people to use up their black bags, so they don't lose the money they invested before the by-law was created



Solid Waste Master Plan

Plan directeur des déchets solides

- Require apartment buildings and condos to compost
- Create recycling depots in the city
- Currently the only refundable items are beer bottles at the beer store. Many plastics and cans can also be recycled in a similar way. This would incentivize people to recycle while also lowering the potential amount of material that ends up in landfills due to contamination.
- Mechanical-Biological Treatment Facility
- Build an MBT facility to recycle more and reduce what goes to landfill, thus extending the life of the landfill.

Forum – Should we aim for zero-waste?

- "Zero-waste" is an ideal that I, in my personal life, would like to achieve. I think it's also something that Ottawa should strive towards - even if it doesn't get 100% achieved, it's a good direction to go towards. However, I'm not so sure about how well the idea of "zero-waste" can be sold to the majority of the city's inhabitants. I think maybe instead of using the term "zero-waste", which might sound abstract and unapproachable/unachievable to some people, it would be useful to name measurable goals that can serve as targets in awareness campaigns (e.g., "Let's achieve X % diversion this year") and actionable items for citizens (e.g., "You can help Ottawa achieve this by doing X, Y and Z").
 - (the above comment had 7 'agrees')
- It seems reasonable to start with a goal of X% Waste Reduction. The term "zero-waste" is as unattainable to consumer minds as "perfection". Every little bit does help, and isn't that a real start?
 - (the above comment had 3 'agrees' and 1 'disagree')



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- I like the 'zero-waste' as a tag line and a goal. Some corporations have already attained this goal. How about contests with good prizes. Businesses would sign up for the effort and report on their progress towards that goal. Annual celebrations of their progress and special insignia they can put on their advertising etc plus tax breaks as they get to various levels. I think you need a big goal.
- Absolutely. I think with proper education people will understand the term zero-waste. It is important to educate people that zero-waste is a journey, a continuous ideology, and not necessarily a rigid target. In 30 years do we want to look back and say "wow we really should have set higher targets" while we're spending millions on expanding and attempting to control our landfills? No way! The way I see it is even if we don't achieve a total zero-waste system in 30 years, we will surely have achieved a great reduction. Let's not aim for mediocrity!

Questions and General Comments

- Does the plan include bylaws to enforce recycling in apartments and condo buildings? My understanding is that these large units often do not participate in the recycling program for the city.
- What are you thinking of doing to encourage a circular economy? How do you plan to encourage residents to reduce waste? What about businesses? I see a real problem with the growth of skip the dishes/ uber eats creating a lot more Styrofoam, which is incredibly unsustainable. Maybe a deposit system for metal containers is required, and people can drop them off at any participating restaurant for a deposit return. Or they can be picked up when their next order is delivered. We have a lot of problems to tackle and limiting the use of plastics (bans) so we are at 1970 levels of usage would be a huge step forward. Not enough, but it would cut down greatly, because I saw huge increases in plastic reliance in the 80s and 90s.
- A 30-year plan. My kids will be in their 60's. I can't imagine our city to not have implemented a circular economy, to deal with plastic/solid waste system, by then. Using pyrolysis technology, the ultimate solution to the plastic /solid waste problem. The



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global, proven technology for processing plastics, tires even garbage to reduce the need for landfill site. The ultimate, better solution to realizing a city's goals of improving the climate situation. There are no negatives here, in a pyrolysis based, waste management infrastructure.

- When will Ottawa follow the example of many other cities in banning the use of single-use plastic bags in retail outlets, including supermarkets and convenience stores?
- What research has the city done into the effectiveness of limiting curbside pick up/charging for excess waste as a tool to total waste reduction?
- What would be the impact of having a single recycling program with plastics and paper placed and collected in 1 bin? Could we have a central sorting facility for garbage that could have machines and people sorting through trash to divert more recyclable material? Another option could be encouraging local manufacturers to build playground equipment or other building materials that would then be repurchased by the city to upgrade parks and reduce building costs.
- Why not include summer weekly garbage pick up? Why not have City separate so all that can be will be diverted from landfill? Why have you not put in place incineration “period”? You do not have to go far – in Ontario – to see that it works – saves land fill – Yes??? All your studies have already been done, so, no need to do more and waste taxpayers’ money (again).
- When will businesses and multi-unit dwellings be forced to compost? Will you eventually ticket garbage that contains biodegradable material?
- Hello, I am hoping that the plan will consider future composting of diapers to reduce waste. This practice is already underway in Toronto. Thanks for keeping the momentum going with your long-term strategy! Claire
- I have lived in Ottawa from 1999-2012, and 2017-present. I have been extremely frustrated that for most of those years I have not had access to the city’s compost pick-up due to living in multi-unit buildings. From 2017-early 2019 we rented in a condo town



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home, and used the compost pick up extensively - it was shocking when we moved back into a mid-rise condo how much garbage we are producing. I do not understand why there is no mandatory compost pick up for these types of buildings. We do not own a vehicle, so even if we kept our own composter on the balcony, it is not clear how we would usefully pass on the results.

- Where can I take electrical devices?
- Who has jurisdiction over waste production, as in packaging requirements, options for refilling station purchases versus buying newly packaged each time, etc? We try to chose low packaging products, compost, use our green bin and recycling bins but still end up with more garbage than we should. A waste management plan should be a cradle-to-grave endeavour, not a middle-age-to-grave endeavour.
- Why are you encouraging people to put plastic into compost bins? This doesn't work. It doesn't miraculously disappear. Even "biodegradable" plastic lasts many years.
- In some municipalities, diapers are put in the green bin. Truly these products are not compostable and should remain out of the green bin. Municipalities that permit diapers in the green bin have sorting processes that remove the diapers which then are streamed with solid waste. As disposable diapers are a large household contributor to landfills, will Ottawa consider promoting cloth diapers?
- In North America, there are some incineration facilities that produce energy and put it back into the grid, and also provide steam and heat to nearby facilities and neighbourhoods. Will Ottawa consider investing in such a facility?
- Has any attempt been made to engage local entrepreneurs to make use of recycled plastics in local applications, such as plastic lumber, road surfacing materials, clean co-generation, or biological cracking and separation into reusable formats? Surely not all of these or other applications require scrupulous cleaning of plastic waste. We need to see some creative uses locally, rather than trying to ship our waste elsewhere or dump it in landfills.



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- Why are we not incinerating like they have been doing in Europe for the past 40 years, while harvesting the energy that is created by the heat?
- I want to offer support for those asking about when multi-residential buildings will have composting. I moved into a condo building last year and I am still shocked at having to throw through compost in the garbage. Actually, I would even use the word distressed. I look out my window at the green bins across the street sitting outside houses and I feel upset. My daily landfill garbage would be reduced to maybe one small bag a week if I didn't have compost material going into it. Then I read consultations on this matter will go for 18 months? Why is it taking Ottawa so long to put these things in place?
- In your Phase 1 report, you indicate that once we transition to the "Individual Producer Responsibility" (IPR) model for the Blue Box Program, "the City will no longer be expected to collect, process, market, or subsidize the cost of recycling collection and/or disposal". What would the outcome of "no longer [...] collect[ing]" be on individual households? I understand the goal is ultimately to reduce the amount of plastic/cardboard/single-use material from the source. But, in the event that I would have material to dispose of, would I be expected to drop off my recyclables at a specific location?
- You indicate in your Phase 1 report that "The younger generation (Millennials and Generation Z) [...] are showing signs of being more environmentally conscious than older generations, with approximately 75 per cent indicating that they are willing to pay extra for sustainable products. As their purchasing power increase, it is anticipated that producers will respond accordingly to appeal to this emerging consumer base.". How was this information ("75 per cent") obtained? Did you run a survey? How many participants responded to this survey? What was the income range of the participants? Is there any data that indicates that individuals of the younger generation are actually paying extra for sustainable products (and not just saying they would)? I would agree that younger generations (of which I am a part) could be more environmentally conscious - how do you plan on engaging them (us) during the next phase?



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- With the Trail Road Landfill reaching its capacity in 2041 (if I understood the Phase 1 report correctly), are there already considerations/ideas for potential new landfill facilities? What is the process for identifying, acquiring, and developing a new landfill? Are there any areas in the Ottawa region that would still have the potential to be developed into a landfill, considering potential future environmental legislation, urban expansion/development?
- You state in the Phase 1 waste plan report that "given the low contamination rates found in the processed materials [...] all of Ottawa's recycled content is currently marketed domestically within North America". How is this known? Is this a standard that Cascades Recovery + abides by? Is the City of Ottawa actively involved in marketing its recycled content and in its domestic sale?
- In Table 4 of your Phase 1 waste plan, where you list options and approaches to be considered in Phase 2, you mention the options of exporting waste outside of the city's limits and disposing of waste in private landfills. How feasible are these measures? Are there existing options that the City of Ottawa could consider?
- In your Phase 1 Waste Plan report, you cite the example of the anti-food waste legislation in France, where large grocery stores are fined if they throw away or destroy unsold food, requiring them to donate the unsold food to charities. Being familiar with France's political structure, I know France is a highly centralized government where passing such laws country-wide would be simpler than in our more (relatively) decentralized system. At which level (federal, provincial, or municipal) would a similar legislation be necessary in order to be implemented in Ottawa? Given current trends in environmental legislation, how likely is it that such a legislation could be considered within the next 5 years?
- I'm curious if the city has looked into partnering with Terracycle in an attempt to divert items from landfill that are currently unable to be recycled. Having bins available, say located beside community mailboxes or in shopping centre or grocery store parking lots, would make the program highly successful. Another option would be for the city to cover



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the cost of in-home/office boxes the company offers, like how new residents are able to receive a coupon to purchase new recycling and compost bins.

- Hello, not a question, but just a comment to thank you for publishing the Waste Plan and relevant detailed documentation - it's a really interesting read, and as I go through it a lot of questions come to mind, so thank you for taking the time to answer them and engaging us like this!
- There are many ways in which we should be doing better to recycle and manage our waste through a whole-life approach to materials used in all elements of our life, but it must be balanced against reality so as to be as successful as possible. The solid waste master plan has a lot of great soundbites (principles, objective, visions) yet is rather lacking in any detail. When shall we expect to receive any real detail on the actual effect of the master plan so that we can constructively engage with you to provide feedback into the development of the plan so that it does not fail?
- An increase in the Ottawa population brings a corresponding increase in revenue through taxation. It is therefore important that the City ensures that the provision of services and fiscal responsibility using taxpayer's money is used as efficiently as possible for this purpose through the creation of new jobs. Can you confirm that the new taxes which will be received will be used proportionally for waste disposal services in the future.
- Thank you for posting the draft SW master plan. I have two questions: 1) Where can I see the Document 6 on Stakeholders? I could not find a link to it. 2) Is there a way in this stage for members of the public to provide comments, for example, a slightly longer text that includes references to example policies in other jurisdictions, and not just ask questions?
- The master plan Phase 1 report (and its Technical Memorandum #1) states that "for larger events such as the Dragon Boat Festival, there is currently no requirement for recycling/diversion as part of the events permit". Where does the waste from large events go? Does it go to the Trail Waste Facility, or to another facility at the discretion of



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the event organizer? Has the City of Ottawa evaluated (calculated) the waste diversion potential from imposing recycling/diversion to allow these events to obtain a permit? What kind of legislation (at the municipal level?) would be required to impose such a requirement?

- The Master Plan Phase 1 Report Technical Memorandum #1 describes a green bin and recycling pilot project in the city parks, running from the summer of 2019 to the end of November 2020. How are you adapting your study to the restrictions imposed on residents during the ongoing COVID-19 pandemic, where the use of parks was highly restricted/limited for some time? Will you extend it to obtain more representative results as to the effectiveness of the green bin and recycling bins in the city's parks?
- The Master Plan Phase 1 Report Technical Memorandum #1 provides an update to the Municipal Hazardous or Special Waste Program transition, whereby the program to manage single-use batteries will cease operation on June 30, 2020. Will this have any repercussions on where I can dispose of my single-use batteries? What does this transition mean?
- Durham Ontario has been successfully operating a "waste to energy" plant for many years. Will the options for Ottawa include incineration as a viable solution?
- Has the City considered implementing direct costs for garbage pick-up based on quantity? Costs for a service that are paid at time of use (rather than in annual tax bills) can make the costs more immediate.
- In the US we collected plastic shopping bags and sent them to the company that makes Trex decking. After we reached a certain weight collected, they sent us a plastic park bench. Is this program or anything similar available here? If we collected those plastics what would a company make for us?
- On garbage day, would there be an easy way to separately collect dry garbage from other garbage? Dry garbage (pallets, metals, hard plastics etc) do not have to go into a landfill, most can be reprocessed for other uses or at least be put into a non-garbage-landfill type area which would be much less costly.



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- As a resident of Ottawa, why do I have to pay when I take things to Trail Road?
- If the goal is diversion, why do we not have regular (e.g., twice a month) local (within about 15km of home) hazardous waste collection. Yes, there is a cost. Is that a higher cost than having people dump in the sewers or the garbage bags?
- I am concerned about the direction we are now taking for recycling Leaf and Garden waste. Notwithstanding the serious mismanagement accompanying the OrgaWorld contact and the later attempts to mitigate the situation, we have to find a more cost-effective way of handling Leaf and Garden Waste. Why, for example, do we haul Constance Bay's huge amount of oak leaves on an hour-long drive fully across the city where they are expensively treated by OrgaWorld? Are we considering the option of establishing some inexpensive on-ground composting facilities (as was being conducted at Trail Road) across the rural areas in the way it used to be accomplished in West Carleton prior to amalgamation? Homeowners used to accept the responsibility of dropping off this material at these facilities.
- I would like to know the options that are being considered to help control the sheer volume of material that we see being placed curbside. Am aware of the current recycling and reuse initiatives available but Ottawa's take-up of these programs is still lower than most large Canadian cities. There needs to be more effort directed towards 'incentivizing' the resident/taxpayer to encourage better individual control of the volume of waste material that is placed curbside. 'Bag Limits' and special tags are one option but come with additional administrative costs and inconvenience. I am reminded of the approach that I experienced some 30 years ago the city of Heidelberg, Germany. That city helped control the volume of household waste via an approach to 'user pay' that required all waste be placed in a special container that was 'leased' from the city. Residents could choose among Small-Medium-Large sizes (with accompanying tiered rental rates) so there was the incentive for the household to minimize the volume. The containers were designed similar to our Green Bin and intended to be handled primarily by mechanized devices. The garbage pick-up service simply would not remove anything that was not in one of these bins. In addition, there were special 'large item' pickup days



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scheduled twice in the year. Contrary to the fear commonly heard when bag limits are discussed in Ottawa, there was simply no evidence of residents trying to cheat by depositing their excess waste in unauthorized locations. The introduction of standard containers would also allow for modernization of handling that would include hydraulic loading (as is for the green Bin) as well as having the potential to accommodate the possible future use of 'coding' of bins. Is staff considering this type of approach among the alternatives to help helping to manage the volume of residential waste being placed curbside by residents?

- City developers dump more waste than citizens who pay for collection services through the tax base, so why not offer that soil to residents to use for gardens or landfill to get rid of it, kind of like the bagged back earth programs, or offer it to farmers or landscape companies that may want it. Buying local will save tons in shipping for sea, land, or air travel costs. Fresh food should be encouraged, since families can make their own preserves with reusable mason jars, as in the past, or we could have workshops to produce various jams, chutneys, or veggies in mason jars that families reuse, hosted by a nutritionist perhaps. Eliminate fast foods or restaurants altogether by replacing them with new initiatives such as the one's mentioned with reusable mason jars, good for sauces, soups, or stews as well, to reduce wet organics that product moulds or similar pathogens. There are many businesses we do not require with remote computing, which can really reduce the city's share of waste, even restaurants since left over foods need to be disposed of whereas citizens can cook their own food, or we can convert restaurants to produce the assortment of foods preserved in mason jars for consumer use, or even return them, clean, for a refund against a purchase at a grocery store that should sell, local farm products, or backed goods within walking distance of homes perhaps involving corner grocers. This will divert much of the smelly contaminated rotting food, that fills the dumps attracting vermin or bears as well. Reusable cloth bags can be washed so we should use those for our produce, or fresh bread. Local seamstresses could gift some bread bags made of cloth that are washable to reuse as well. Along with many other ideas, such as over consumerism, failure to support local businesses reduce transportation costs, ensure a bountiful food supply, and support families together.



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- Remote work will actually help municipalities to prosper, reduce waste, and make life more affordable with human resources that no longer have to commute, so another possibility is using the transit system to deliver goods, since fare paying citizens or children bused to school will not be required, in many cases, but first we have to figure out how much we are going to pay parents who home school, since elementary school teachers make \$100,000 per year gross. Citizens paid the same will support the construction industry and the municipal tax base, but our costs will go down, so I think a lot of the ideas mentioned in your PDF report for the solid waste master plan make a lot of sense, such as tool lending libraries, repair cafes, elimination of single use plastics, home cooking, and so forth, since this is how we lived before daily hourly commutes, to or from work, fast food, or hectic lives became the norm, but then I spent a lot of time in a rural area, with my own well, septic bed, farm fresh eggs, home baked cakes and meals, so I applaud the ideas. Good work. More people will probably help with ideas too so that's how we can garner some better planning moving ahead for our families here in Ottawa. Have a great day.



Appendix 5 – Online Dialogue Sessions with Residents and Stakeholders

The following are the combined minutes from four dialogue sessions with residents and stakeholders, hosted in June 2020. In total, 96 participants attended the sessions, which were structured as virtual World Cafés.

Feedback from Online Dialogue sessions, June 23rd to 25th 2020 (4 sessions in total)

Consider everything you know about the current waste system in Ottawa. What are the strengths of the current system?

- Blue and black bins separate, which reduces contamination
- Services are well delivered and reliable
- We do well at educating public on recycling, but it needs to be ongoing... Collection calendar is good.
- Green bin program is good.
- Diversity of things accepted at curbside is good.
- Services are well delivered and reliable
- Recycling in single family homes
- Materials are picked up on the days they are supposed to be picked up most of the time
- Chutes can be used either for garbage or for organics
- People in apartment buildings produce less garbage since the family units are smaller
- Green bins are less smelly since plastic bags have been introduced



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- Recycling bins in parks
- Not City, but a good example: Fabulous waste management on Campus of University of Ottawa
- Great that we have a green bin program
- It's great that the green bin program that it is available to a wide array of people
- Good that the city is trying to expand green bin to MR properties
- There is a lot of familiarity recycling
- People in the City of Ottawa expect to be able to recycle wherever they go (and increasingly more, compost) – they want to see recycling and compost in parks and on the street
- “Culture within Ottawa to use these services (recycling and green bin)”
- Our garbage collectors work very hard – they work long hours. Their dedication is a strength
- Green bin program is great to have (at home and in public spaces)
- Green bin is accessible in schools – 60 or 70% of schools have them
- Bi-weekly garbage pickup – encourages people to use their green bin that is picked up every week
- Curbside pickup in homes is easy
- Yellow bag program is fantastic for businesses
- Change in collection contract – City of Ottawa new collection contract to collect green bins on-site is a huge win for multi-residential landlords and buildings



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- The addition of plastic bags in the green bins – it is a big step for getting multi-residential properties on board. Tri-sorters are very expensive, but if you can collect in plastic bags, you can actually put food waste in chute
- Pictures in education material

Where do we need to improve?

- Need to reduce the amount that we send to landfill. Need to fund programs that proactively seek to reduce what goes into waste stream (e.g. cloth diaper programs).
- City needs to start talking about the circular economy.
- City needs to implement a user pay system for residential garbage – tag system, for example – we need a financial disincentive OR a clear bag policy.
- Need to improve the tools and resources the City has that can influence consumer behavior. Seems like there is advocacy but no action.
- We need to increase number of people using green bin program and implement green bins in all apartments.
- Make it more convenient to deal with a wide range of products and materials. E.g., one drop off location for convenience. Rather than dropping off at several locations and driving across the city.
- Better education and outreach – make it consistent and throughout the year.
- Less garbage in public spaces and at special events, more containers in the public realm.
- We struggle with the uptake using the green bin – with the recent changes in hopes to encourage participants. Would like to know if the strategy with adding the plastic bags did it help.



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- Consolidating items such as batteries, broken items to one drop off location for convenience. Rather than dropping off at several locations and driving across the city.
- The number of green bin participation indicates it's not working optimally. We have a good plan with Renewi but the uptake is inadequate. We are moving in the right direction and it's good we have a waste plan.
- We are lucky to have a blue/black/green bin program – some municipalities have a bag a tag program. We have a detailed calendar that provides good information.
- We need to implement green bins in apartments
- The communication in the buses are very informative. E.g., not put grease down your drain – put in the green bin. Paper napkins and paper plates can go in the green bin
- Helpful to have consistent and more varied messaging throughout the year – seasonal messaging. E.g., freeze your food in the summer months
- Distributing bags would be a waste of \$ - we come across different packaging daily – and we can use those packaging items to put organic material.
- Communication is key – Include tips in our messaging
- Recycling bins – we often see unacceptable items; e.g., Styrofoam. Materials not acceptable should be communicated to residents – we need better communication
- Upstream communication with grocery stores
- Provide residents with information on what happens to the recycling material. This would be helpful for residents to know what actually happens to it. Could we visit the processing facility.
- Green bins in schools program helps educate parents. Great program
- Misinformation regarding contamination – is an entire load sent to landfill if there is contamination? Needs to be part of the communication.



Solid Waste Master Plan

Plan directeur des déchets solides

- Spend more \$ on education
- Processing in the east, half of the city has to travel all away across for disposal, more traffic, GHGs etc. Need transfer stations in west.
- Collection methods need to evolve. Labour is huge challenge. Need automated collection.
- Bag limit not enforced
- Encourage/Enforcing use of green bin (too much in landfill, methane etc), across businesses
- Pay to put out garbage
- Businesses – need mechanism put in place
- Hard to get compost out in multi-res building, need better system for green waste in Multi-res
- Need more education for green bin and recycling, especially for multi-res
- Got to enforce at multi-res
- Bag and tag, pay as you go
- Single use plastics need to be banned
- Parks and city streets and at work – inconsistent bins (coffee cups etc) – end up with so much contamination due to this
- Communication needs to improve
- Decentralisation. Local solutions.
- Recycling is good to an extent, but need to see garbage as a resource. Local way to use the garbage as a resource. Esp. green bins.



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- City role in IC&I waste – they’d like to see this. Construction waste etc is valuable – need to treat as a resource, city can help with this. Need to do this locally. This is an opportunity.
- Local solutions to waste management. Roles into climate change discussion.
- Need to constantly educate, not just one offs.
- Look at night time collection due to traffic – perhaps do a pilot for this. Noise consideration but ways to work around this.
- Reduction is huge, circular economy, sharing economy.
- Waste collection in parks not often enough, too much overflow, particularly downtown
- Can’t use HHW depot if you don’t have a car
- Not enough P&E, more social media messaging necessary
- No limit on how much gets put out to the curb – no matter what gets set out, it gets picked up (in Vancouver, they have a cart system – you can’t just put a couch out to the curb – you have to take it to the transfer station and you are charged for it by weight – they also have a recycling depot where you can sort “almost anything under the sun”. they are kept clean and very inviting. Recycling areas are spotless) ✓✓✓ – no waste hauler respects the bag limit. One comment: “I find that odd.” Arnprior is limited to 2 bags a week – cannot have bulky items. Continue to be amazed at the amount of “junk” people can put out. A resident in Arnprior said they would bring their waste from Arnprior to family’s house in Ottawa to dispose of it at the curb
- There is no penalty for people who leave a lot of waste at the curb. We all know it costs the City a lot of money; it costs the taxpayers a lot of money. There is no advantage or incentive to reduce waste or go zero waste – some people make a big effort while others don’t
- Doesn’t seem like there will be a penalty for illegal dumping either



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- The switch to bi-weekly collection was big, but people got used to it and now we aren't improving. We need more "carrots and sticks"
- The disconnect between the city and the IC&I sector is problematic for residents – City has very little involvement in IC&I – so there is very different messaging. If we want a standard in the City, it needs to be the same between workplaces and home. U of O is a great example – at LRT station, they have waste, recycling, and coffee cup composting, then you walk into the school, the signage is very different and messaging is different, and people who come to Ottawa from somewhere else and experience a different system plays a big challenge – City could play a role in standardizing waste
- It is expensive for businesses to provide compost – support for businesses is needed
- At City Hall, in the cafeteria – served in a paper cup, goes to meeting – but once done, doesn't know what to do with it. Nothing at City hall that tell me what to do with it. There are recycling bins, but the signage doesn't tell me what to do, so I put it in the garbage. I don't know if I put it in the wrong recycling bin if it is going to cause problems, so I just put it in the garbage. It absolutely needs to be clear and helpful. Most people want to do the right thing.
- Small multi-residential properties – needs to improve how we are handling waste. Multi-Res properties- some of common piles, some have bins – at least they have bins, so the garbage isn't spread all over the place – not sitting at curb for a day, two days. The problem is how the City allocates who gets bin service and who doesn't. Two three-unit properties that share a driveway – should be classified as 6 units and get bin service, but the City doesn't allow that and it doesn't make sense (answer provided to resident by City staff, but let resident know that all options will be considered)
- Garbage collection staff probably have health issues from lifting so much heavy material. A system with Mechanical loaders would help them
- Single use plastics that you get at a coffee shop or fast food – I don't know how they are recycled, if they are recycled or how. I don't know if the City could take that stance to do



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a ban or have a plant-based plastics program – don't inundate the system with that amount of volume. Plant based can go in the compost. This is a BIG waste generator.

- Illegal dumping at multi-residential properties
- Very little education from recycling programs at multi-residential properties. A few years ago, the landlord gave out recycling bags, but most people use them as grocery shopping bags
- A lot of transients in and out of multi-residential properties (college and university students)
- Schools have green bins, but kids aren't allowed to use the green bins, so the waste gets sent home. Then kids in multi-res properties that don't have green bin can't use it
- A bin that can close better (or help with pest control)
- Recycling is not accessible for businesses – it would be good to mimic that level of accessibility for businesses
- “how do we get over the yucky feeling with recycling and green bin programs?”
- It would be good to have a standardized program in new developments
- Construction waste management – City should consider
- Would like to see the City of Ottawa use social media more – Ottawa Public Health is one of the best social media channels in north America
- Waste explorer is nice but is not user friendly; missing a lot of things.
- A main concern is cost, but we need to start investing
- Invest money in “garbage policing” – use measures like clear plastic bags – let landlords and waste collectors see if people are doing their job. This is done in Belgium and it helps a lot; the “shame” factor – your neighbours can see what you are doing



Solid Waste Master Plan

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- Educating the youth
- Incentives to learn or make in Belgium, there are bags for everything, and garbage bags cost much more than recycling bags. Pay as you throw
- More signs in public so people know what goes where

Imagine it's 2052 and we've just completed our 30-year solid waste strategy... What does success look like to you? What does success look like to you?

- No more plastic, just bioplastic, almost everything will be compostable.
- No more landfills, everything is diverted to recycling and composting.
- New buildings are built with the right infrastructure: bigger garbage rooms, doors/frames no longer get bashed by contractors when they move the bins
- Automated collection is in place.
- City is leading by example so better waste management at city buildings.
- Bag limit is enforced. More enforcement happening generally to get residents to do the right thing with their waste.
- Circular economy is achieved. Closed loop systems with zero emissions.
- Zero waste is achieved. The first City in Canada that achieves zero waste.
- A pay as you throw system is in place.
- Bins across homes, city buildings, parks etc are consistent with consistent signage and education.
- We're dealing with garbage locally so that it's not shipped elsewhere and using local innovation to deal with it. Local solutions to waste management. Roles into climate change discussion.



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- Garbage is seen as a resource. Want everyone to talk about “waste” not as “waste” – take this a learning opportunity together – movements, campaigns – see waste as treasure
- City is playing a role in IC&I waste.
- Recuperating energy from the system and decreasing methane through innovation. Although incineration is a bit against waste reduction. Burning everything not the overall answer.
- Reuse/repair is focused on. Right to repair is instigated. Ottawa has pushed other levels of government to do this. Repair cafes etc. Products easier to reuse.
- Ottawa advocating other levels of government; e.g., SUP bans and right to repair. Stuff needs to be legislated and enforced.
- We’re diverting majority of waste from landfill – 80-90% at least. Need hyperaggressive targets for waste
- Citizens are informed. Everyone is engaged and understands that reduction is paramount.
- No landfills, everything is being reused. (look to other best practices to see how to do this; e.g., look to Nanaimo, recycling cement etc – they were legislated to)
- Waste to energy implemented so waste is a commodity, get energy from it. The tech is out there.
- Need regulatory change to enable this. Tech is evolving and at some point they’ll be a tech that meets all the hurdles we’re facing. Durham – WTE. But they still have segregate waste streams, would be great if could put all waste together.
- Recuperate energy from the system (decrease methane). Although incineration is a bit against waste reduction. Burning everything not the overall answer.



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- More opportunities to return materials, purchase things in a sustainable manner, no SUPs, make it easier, make it affordable.
- Need legislation
- Post COVID situation – probs with banning SUPs now.
- Green bin – what is compostable and what is not?
- Set ambitious targets on waste reduction and banning of SUPs.
- Procurement policies at cities – whatever’s in our remit.
- Supporting organizations already doing some of this work to recover goods.
- Big government actions can make changes. Education is great, but city needs to do more. Activist government measures to force more than encourage.
- All waste in Ottawa stays in Ottawa.
- Need relationship with business and residential stakeholders
- This is going to cost money!!! Might be needed...
- Legalize so that all materials have to be recycled if they can. (e.g., in Germany)
- LOCAL
- Wants this to be enforced, has to be a requirement.
- Ottawa can’t do it on its own.
- Wants things to happen fast, not just looking at 2052.
- Right to repair is instigated. Ottawa push other levels of government to do this. Repair cafes etc. Products easier to reuse.
- Stuff needs to be legislated and enforced.



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- Make Plan fluid. Technology is evolving. Changes in waste stream are huge right now, and getting better.
- Flexible but have to have ambitious targets. Don't change targets.
- Closed loop systems with zero emissions.
- Want multi-res programs to be enforced. And the right tools to do it properly!
- Targets – more aggressive for multi-res because can do economy of scale. 70% bare minimum. Up to 80 and 90 with circular economy.
- Some industry does achieve 80% but like to see higher.
- I want to walk into a business that has a recycling bin, and be confident that it is actually going to get recycled (i.e. Tim Hortons has recycling, but I am skeptical as to how much gets to the recycling facility. People are clumsy in using programs in public, and they are very contaminated)
- Businesses are important to get on board. It is not always easy for them, and it is expensive for them to implement (specific reference to malls – intentionally bought compostable packaging – cleaner at mall put all the compost in the garbage) – Rideau Centre is doing a good job at reducing waste with sorting stations and reusable containers
- Whenever someone new moves to Ottawa, orient them – give them the guidelines for using our waste programs
- Hopefully there is a relationship between the City and commercial leasing – some sort of oversight, training, etc. for businesses so there is no excuse for not diverting waste
- Avoiding waste to energy type facilities – it will worsen our climate strategy (“I don't think it is a good idea and I really don't want to see EFW in our future, or for my kids”)
- A policy of 1lb of waste bi-weekly



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- Make more plastics recyclable (i.e., plastic coffee cups, plastic coffee lids)

What are the key considerations for this success?

- Behavioural change needs to happen. People need to take responsibility.
- Needs to be easy for people to participate.
- Need to have neighbourhood-specific initiatives or activities.
- Communication is key. Also, provide residents with information on what happens to the recycling material. This would be helpful for residents to know what actually happens to it. Clear up misinformation, e.g., what actually happens to recyclables etc that are contaminated?
- Spend more money on education
- Need circular economy
- We will need multi-stakeholder engagement for how we will do this and how we will manage the cost, but take into account cost savings.
- Extended Producer Responsibility needs to happen.
- We need to consider “Change management” – for projects and MPs to be successful, we need effective change management. This is not an overnight thing; it is a long-term commitment.
- People need to take ownership of waste and know their responsibilities. What are my responsibilities as a citizen?
- We should have metrics so that we can see how we are doing – “an accurate measure” not just of the resident’s measure, but how our processor is doing.
- There has to be a shift from producers – they create the packaging – you think of little things like meal prep like HelloFresh, and you see the tiny little containers that they give



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you and it is unnecessary waste. The City trying to move towards reducing waste – there will have to be a push to producers and businesses to limit packaging with their products.

- There needs to be an economic incentive on the producers
- Messaging is not clear across the province – it is different in every municipality – when people move, go on holiday – it is always different and the messaging is not the same. Packaging should indicate what you should do with it in the end
- Interpret what a City can do aspirationally, not just focusing on the risk. There are many municipalities that have ambitious or innovative projects to work with businesses, put in single-use plastic bans. City will need to exercise its power for how we can control waste
- Look at disposal bans
- Look at programs for businesses
- Amazon is huge in Canada – the product you buy is in a package, then amazon packs it in their branded equipment, and then they wrap it to keep it safe. Amazon is doing nothing about it – but consumers need these items.
- Incentives for businesses to recycle properly
- Decisions that are going through the city – having a “climate lens” – thinking about climate change
- Changing to anaerobic composting so we can create biogas, biofuel
- If incentives are given to landlords for improved recycling, the residents should be able to see incentives
- “Neighbourhood watch” incentives – give them an award or appreciation “this area is a beautification award” they keep their waste and recycling clean



Solid Waste Master Plan

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- User fees
- It would be great if the City’s YouTube page was posting in more than English and French
- Engaging younger users (switching your marketing and media to market younger users – TikTok, etc.)
- Make people pay for their garbage
- More education on what can be recycled – EPR
- So much confusion with recyclables
- So many businesses right now promote bioplastics and that they are acceptable in Green bin – but they are not acceptable in Ottawa’s programs. This needs to be considered as more and more bio-plastics are entering the system
- Circular economy

Multi-residential Session

What are the strengths we can build on?

- We could use chutes already in place for either garbage or for organics.
- People in apartment buildings produce less garbage since the family units are smaller.
- Green bins are less smelly since plastic bags have been introduced. Changes with the green bin program have made it easier for properties to participate (plastic bags, and contractor coming on site to collect material) - plastic bags helps with the smell and mess – makes it easier for those managing the programs at MR properties.
- The City’s SW Inspectors and enforcement is positive (probably need more of them)
- City’s program is easy to understand for someone who is new to recycling.



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- The community in Ottawa – there is a strong, growing population – more learning about the zero waste philosophy. There are many in MR properties that are dedicated and want to reduce their waste (some even freeze their waste and bring it to a neighbouring property with green bins)
- There are also a lot of good property owners and managers, residents as well, who are interested in making this happen.
- We have a green bin program, which is a huge strength
- Having moved to biweekly for curbside is helpful to divert more
- Has a number of tools that are available. The fact that we are in a government City, there is a culture of policies – we have many policy tools available to us (even if they aren't being used, they are there)
- Changes with the green bin program have made it easier for properties to participate (plastic bags, and contractor coming on site to collect material) - plastic bags helps with the smell and mess – makes it easier for those managing the programs at MR properties (1 agree)
- We have multiple programs (yellow bag, recycling, green bin) – a big strength – there are options for residents to divert waste
- Having a supportive Board at condos is instrumental
- Options for recycling at MR properties (large containers)
- The City's SW Inspectors and enforcement is positive (probably need more of them)
- How fast a recycling program could get set up in a new building – lived in a brand new building, and within the first few months there was a recycling program in place
- Simple program in place
- City's program is easy to understand for someone who is new to recycling



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- Pamphlet that comes out “what bin to put it in” – we have a lot of students moving in. Every region has different regulations, grabs a bunch and distributes them to new residents
- The community in Ottawa – there is a strong, growing population – more learning about the zero waste philosophy. There are many in MR properties that are dedicated and want to reduce their waste (some even freeze their waste and bring it to a neighbouring property with green bins)
- There are a lot of good property owners and managers, residents as well who are interested in making this happen
- We have a lot of building blocks in place re policy (CCMP; climate state of emergency) – a lot of building blocks that we can build off of for a successful SWMP
- A lot of the most successful cities in zero waste have tied their targets to climate reduction targets
- We have the infrastructure in place (we have a landfill – it will get used up at some point, but compared to other municipalities we have some “breathing room” at Trail Rd – so it is important that we don’t rush into options like incineration) it is better for the environment to leave it in the landfill than to burn it
- “a decision isn’t a change it is not an action” – until you implement it, it can be a lot of “blah blah”
- Firm believer in finding positives, the assets we have are positives, but we aren’t necessarily presenting them as positives
- City is starting from a decent place in comparison to other municipalities (and not far behind)
- We have substantial buy-in from residents. WE may not have 100% diversion, but residents are participating



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- In Ottawa, we are “operating within our own space” (versus Toronto – garbage is going to London, composting is going to Moose Creek) – for us, all is processed within boundaries of Ottawa (leaving aside IC&I)
- There is a willingness to look at new ideas (even though Plasco didn’t work, there is a greater openness among the City to actually investigate different options) – how can we deal with a waste stream that continues to change? The City seems open to this

What challenges do residents in multi-residential buildings face?

- Property owner/superintendent not interested in having green bin, no incentive to offer that service.
- Tenant engagement/education is not happening. No one knows what to do or how to get their building to participate. People don’t realize they can request a green bin, it’s not very well known
- Depends on your landlord or property managers and whether they are on board. Needs to be enforced, shouldn’t be voluntary.
- Accessibility – when you are up on the 15th floor, for example, if there is no green bin chute, when it comes to residents who are busy and not prioritizing waste, they are not going to want to manage it.
- Information – for newer comers and international students – a lot of them don’t know what goes where.
- Not convenient - bringing the material to bins outside or down lots of floors in high rise buildings.
- Need to focus on renters in high-rises, where they don’t have as much agency to advocate on their own part for the adoption of green bin.



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- The challenge of retrofitting a high-rise building is challenging but fundamental if we are going to meet the challenge of diverting waste – a burden that will need to be shared by multiple levels of government.
- Space is a challenge in multi-res buildings
- No green bin program in the building
- Not all buildings operate the same way, difficult when you move
- Weeks go by with one of the bins being missed, so people put their recycling in the garbage
- The residents are supposed to haul out the green bins and bring them back in after collection – major deterrent, would involve too much of their staff time; bins also need to be cleaned
- Feels like City doesn't want you to compost
- Property owner/superintendent is not interested in having green bin, no incentive to offer that service
- Tenant engagement/education is essential for success
- People don't realize they can request a green bin, it's not very well known
- The City has to be vigilant
- Need to reduce the amount that we send to landfill
- Will we actually make it to the end of Trail's lifespan? With COVID, there is more waste at curb than ever.
- "Circular economy" movement is the way we are going – would like to say it is a strength, but I haven't seen the City talk at all about it.



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- The City has focused way too much on recycling, and not enough on reduction. City needs to take a much stronger and more proactive approach, including ban of single use plastics – including plastic shopping bags. Cannot wait for federal government – needs to move now
- Needs to fund programs that proactively seek to reduce what goes into waste stream (i.e. cloth diaper programs) and stopping recyclable and compostable material going into green bin. Focus on reduction
- City needs consistent messaging on bioplastics. Major problem. Misconception “oh, we are using compostable plastic, and saving the environment”
- City needs to implement a user pay system for residential garbage – tag system, for example – we need a financial disincentive OR a clear bag policy
- 6 points of zero waste that we need to improve on: awareness education research; system thinking; 100% recycling and compost; sustainable system; transformed industrial design; zero depletion legislation and policies
- How does the City have tools that can influence consumer behaviour? There are a lot of comments about what we want others to do – not sure that the City has the tools and resources to do this stuff? – Seems like there is advocacy but no action. How do you make it work in real life?

What does success look like?

- Hope that together with some provincial and federal changes, hopeful that there will be a ban on single use plastics and more clarity on what type of plastics are recyclable. Getting plastic issue under control
- Diverting 75-80% - be ambitious
- Hyperaggressive targets for waste “pre-diversion” – reduce incompatible packaging materials.



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- We should be able to get to a point through composting and effective recycling programs that we aren't producing a lot of garbage
- The first City in Canada that can achieve zero waste – every individual can do it if you want to.
- Want everyone to talk about “waste” not as “waste” – take this a learning opportunity together – movements, campaigns – see waste as treasure - City plays a role in connecting City together – more of a sharing economy
- Dumpster diving and bringing things to rummage sales
- Less than 15-20% of waste going to landfill
- Citizens (whether new or living here for a long time) are informed about the programs and why it is important
- Let's make waste management fun
- Everyone is engaged and understands that reduction is paramount
- Alternatives to plastic
- Produce less waste, circular economy
- Live waste-free, no more single use materials
- Buy and bring home only what I need instead of a lot of packaging
- Get things I need from libraries, own less, things get reused
- Less garbage in public spaces and at special events, more containers in the public realm
- No more plastic, just bioplastic, almost everything will be compostable
- Non-recyclable containers are no longer legal



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- No more landfills, everything is diverted to recycling and composting
- More multi-res buildings: City will be denser, that's the future, we have to find a solution now
- Property owners are our allies
- New buildings are built with the right infrastructure: bigger garbage rooms, doors/frames no longer get bashed by contractors when they move the bins
- AC: is able to divert a lot of trash through Green Bin (food waste, cat waste) in an apartment building, but now in a condo townhome and there is no Green Bin
- Illegal dumping
- Wish we had tri-sorters; want the City to pay for them
- We need change management – cultural thing; government – the City does not have a change management group, and certainly not for this.
- Accessibility – when you are up on the 15th floor, for example, if there is no green bin chute, when it comes to (especially students) who are busy and not prioritizing waste, they are not going to want to manage it (freezing it) – need to partner with buildings to make programs easily accessible for consumers or residents (issue for people with physical limitations)
- Information – for newer and international students – a lot of them don't know what goes where – it is simple once you know, but there needs to be more broad info (i.e., facebook, an app for MR – to reach younger individuals so they know what goes where)
- Educating the general public – where you are dealing with more of a marginalized sector of the population than is sitting at this group right now. You need to direct messaging to individuals who are not dedicated to the environment



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- Education – lived in MR for 7-8 years and did not see any public education or promotion on waste management. Need more outreach. Communications for waste management is limited and could be improved (a good example is Ottawa Public Health – they have the most amazing communications team – keep people really well engaged. If Waste Management could take some ideas)
- Convenience – bringing items to the bins – bringing the material to bins outside (sometimes there are physical and mental challenges that are not engaged in the process) – you are never going to get 100% but any waste reduction in our situation is an improvement – more of a challenge in high rise buildings downtown.
- Programs are a bit scattered – i.e., HHW is like a “pop up” collection every few weeks – you have to stay on top of it as a resident to know what is happening.
- City of Ottawa not recycling plastic bags – when practicing zero waste, noticed that she has a lot of plastic bags (she is looking to reduce, but when she needs one, she cannot recycle)
- Need to focus on renters in high-rises, where they don’t have as much agency to advocate on their own part for the adoption of green bin
- The challenge of retrofitting a high-rise building is challenging but fundamental if we are going to meet the challenge of diverting waste – a burden that will need to be shared by multiple levels of government.
- Things that aren’t recyclable – they see a pot and want to recycle it – good intentions but no clarification. We need to educate residents on these items.
- The app and website – where you can find out what goes where – it is a bit out of date and a lot of items
- Multiple languages are important



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- If the City were to help people with clothing – divert textiles and furniture. If residents were more well-informed and could easily access this information, there could be more opportunity for diversion
- Space is a challenge. Had a garbage room with a chute and garbage bin and it used to have the plow. Got rid of the plow and put recycling bins. If we get a green bin, it will be very crowded.
- Calendar – knowing when to pick things up. Talked to the waste management company – “garbage is Monday, plastics and green bin is Tuesday, paper is Friday” and she asked “can I get a calendar so I know when everything is being picked up?” and then the calendar said everything was collected on Wednesdays
- Object to the amount of plastic and consumer packaging that arrives at homes. In 2052, plastics would be minimized to virtually nil. No garbage pickup of plastics. This needs to be a priority
- 100% uptake for all waste diversion programs
- Right now, we have plastics everywhere. Municipal could do a lot to eliminate and remove plastics.
- City will have a full circular economy plan aligned with province, fully integrated EPR
- Trail Road actually being smaller
- No incinerator or “anything stupid like that”
- Disposal of liquids and collection and disposal of hazardous waste
- We will be able to get there because we have the knowledge and technology, we just need the political will to get there
A lot of liquid and hazardous waste that is not under jurisdiction of municipalities needs to be a part of EPR



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- Companies and employers who are environmentally-friendly will stand out in the community – “employers who don’t recycle end up on the blacklist”
- Key considerations
- Speaking to someone’s values works better than punishing
- Rewards, incentives are not sustainable for the long term – better to get people on board, foster understanding and emotional attachment
- Education about the environmental advantages of composting: Why it is the right thing to do
- More communication and tools in place to explain how to recycle/dispose of things properly
- Need circular economy
- Pro-active diversion
- We will need multi-stakeholder engagement for how we will do this and how we will manage the cost, but take into account cost savings.
- Will still need to manage residual waste (some Scandinavian countries are doing some effective incineration with aggressive filtering so that there is minimal effluent into the air
- There are gaps we need to fill to help individuals meet zero waste.
- Extended Producer Responsibility
- It is hard right now to imagine life without plastics – but if we create a path for plastics to be reused, recycled
- Consider incineration
- Garbage is convenient



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- Can't necessarily get rid of every single plastic item
- Plastics shouldn't necessarily be as easily accessible (i.e., handing out straws to everyone)
- We need to include "the built environment"
- We need to consider "Change management" – for projects and MPs to be successful, we need effective change management. This is not an overnight thing; it is a long-term commitment.
- An effective communication plan. What are my responsibilities as a citizen? One criticism of present system: I still get stuck on what goes in which bins. Why is that person putting Styrofoam in the black bin? A marker of success would be a good communication strategy – simple concise repetitive; and somewhere to go where we can get quick answers
- If we are not careful, there will be quiet commercial pressure on municipalities and regions to install incinerators. "the next trick they will come up with is offering P3 agreements, and of course that is very attractive to City Councillors" – there has already been an unsolicited approach to the Chair of our Committee – it is already creeping around
- There isn't information about how much of the waste that is sorted actually gets recycled. Recycling needs to become tiny and we should have metrics so that we can see how we are doing – "an accurate measure" not just of the resident's measure, but how our processor is doing
- Even today, I don't think I've ever seen the City do a detailed analysis of what is in the landfill at Trail Rd



Appendix 6 – Internal Staff Survey (Waste Management in the Workplace)

The following are the consolidated responses to an internal City of Ottawa staff survey that was completed by over 1,800 respondents during the month of June 2020. The purpose of the survey was to obtain input from staff on waste management practices in the workplace, including waste generated by staff as part of their jobs, the personal waste they create at work, and waste collection in areas of public access within City buildings and facilities.

Ideas from Internal Survey

General comments:

- There is a surprising lack of recycling and green bins all across the corporation, particularly within Fire, Paramedics and OC Transpo.
- Where recycling/green bins are provided, ensure the material remains separated when it is collected. Need to ensure the material remains separated all the way through to collection.
- Participants were divided when it came to deskside garbage bins. All the below comments were mentioned at least a few times:
 - I want a deskside garbage bin
 - I want deskside bins for all the waste streams
 - I don't want any deskside bins (everyone should walk to a centralized location and separate their waste themselves at a "recycling station")
 - I only want recycling at the deskside
- Bin locations (and the need for more bins) need to be improved. All below comments mentioned frequently:



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- More green bins in my workplace
- Green bins in all kitchens
- More recycling bins in my workplace (glass, plastic, and paper)
- Recycling and green bins should be more conveniently placed than garbage bins
- No garbage bins in the bathrooms
- Cafes and restaurants need green bins (and we need to ensure they dispose of the organics properly)
- Bin collection frequency: bins should be collected on a more regular basis.
- Bin system: make all bins consistent across all facilities (colour of bins, signage etc).
- Signage: needs to be improved on the bins/above the bins. Very popular comment – make the signage clearer, some people asked for graphics instead of images.
- Education: need to educate staff better on the waste system at work and what they should be doing.
- Enforcement: disincentive for not doing the right thing, even fines. There's too much contamination in the bins.
- No more single-use plastics and greatly reduce the use of plastic:
 - Through procurement
 - Getting restaurants/cafes in facilities to do the same
 - Educating staff
 - Staff BYO lunches etc
 - Reusable cutlery and dishes



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- Procurement needs to be improved so that we purchase products with less packaging etc.
- Shift from plastic to compostable packaging (the things we buy, and ensure cafes/restaurants do the same)
- Go paperless
- Eliminate Styrofoam
- More of all types of bins in public spaces.
- Less garbage bags being used somehow.
- Ottawa as a City leads by example
- Reuse, refurbish and upcycle as many items as possible.

Specific ideas:

Collection/bin system

- Recycling stations – either one bin split into 4 or 5 (depending on number of streams) or 4/5 bins right next to each other (attached).
- Single stream collection, particularly in public areas such as hockey rinks.
- Move towards something like they have in South Korea - more bins for each category, but also more clarity.
- Split bins at deskside for paper and plastics
- Remove garbage bins entirely
- Automated trucks
- Remove curbside and collect at the loading dock



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- Clear bins
- Larger recycling bins, smaller garbage bins
- Green bin directly under paper towel dispensers in bathrooms
- Tighter seal on food bins
- Install metal bins
- Recycling stations near elevators
- Food collectors on top of counters in kitchens
- Fun recycling stations. Invite local graffiti artists to 'Paint It Up!' prior to indoor installation.
- Weight pick up for scrap metal
- Separate glass and plastic collection.
- Specific bins for all the various recyclable items.
- Better design of kitchens to house the necessary bins.
- Consistency between bins at home and at work to make it easier to recycle in the workplace (colour/signage etc).
- Having one truck come once a week that picks up everything instead of multiple trucks throughout the week.
- Organic waste pickup person walking through the office to collect stuff after lunch is over.
- All goes in the same bin. Sorted by the contracted collection provider.



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- Collection bins are accessible through an inside/outside door that allows for immediate removal of waste from the work area to the outside and pick-up from the outside.
- We could limit collection time in offices by using shared garbage/recycle bins in common areas.
- Less beats per truck as they seem to always rush.
- Company such as [this https://greentools.ca/](https://greentools.ca/) make work bins that can create great place for food waste, educational sites and it also create great compost that can be collected and used on the city properties. Thus, saving money.

Increasing diversion

- Expand the type of waste collected e.g., make sure have programs for batteries, cartridges/toners, electronics, hazardous waste, office furniture, needle collection, scrap metal
- Composting is done onsite
- Cafes and restaurants:
 - Compostable packaging
 - No plastic packaging
- More shredders
- Collect Styrofoam separately and recycling it!
- Special waste days at work e.g., for paint and electronics
- Hazardous waste drop-off locations for city facilities
- Better recycling systems for DVDs and CDs, particularly at library.



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- Have item in contracts for all city jobs requiring the winner of the tender to provide recycling bins on the job
- Updates to food contracted services and vending machines to ensure all products on offer have recyclable content.
- Garburators in kitchens and restaurants
- Biodegradable garbage bags.
- Rinsing station for containers (so cleaner when go in recycling so more likely to be recycled)
- Deposit-refund scheme for drinking bottles/cans
- Large buildings like 100 Constellation can run hazardous waste depots certain months of the year for things like compact fluorescent bulbs, paint, oil, etc...
- Vending machines with canned beverages only
- Stationary should be in sustainable packaging (or no packaging)
- Green bin waste could be composted at each major site and then used for fertilizer for lawn maintenance.
- Central depot for wood and metal, batteries, e-waste.
- Vendor contracts include waste management responsibilities at higher standard
- Having a drop-off depot for old computers & computer accessories.
- We could also have more needle disposal boxes outdoors and indoors of the building for clients

Reduce/reuse

- Procurement: more bulk buying, less packaging, no SUPs, more compostables.



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- Cafes and restaurants:
 - Reusable dishes and cutlery
- No plastic in green bins
- Find a company interested in scrap lumber containing nails and wire.
- Mulching of garbage to reduce amount
- A vending machine that provides an incentive to obtain credits to purchase reusable items such as beeswax wraps, glass water bottles etc.
- Water stations to help rid of single use bottles.
- Reuse nuts/bolts/washers, etc.
- Discarded books should be sold in bulk as used to a broker rather than recycled for paper.
- Better digital and electronic record keeping to help go paperless.
- Set up a system to reuse more items before ordering from Grand and Toy etc.
- Purchase products with less packaging.
- Create a program to make note pads out of the paper that is wasted via printing.
- Electronic document submission.
- Maybe part of the lease in city buildings is to have a green supply chain.
- Promote zero-waste lunches.
- Increase the lifecycle replacement of equipment to minimize the e-waste generated.
- Higher printing cost to dis-incentivise unnecessary printing



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- Specific website with pictures, details about products ordered from other depts before buying, continue with recycling as it is.
- Paperless transactions
- Reduction of disposable plastic materials where they can be replaced by ones that can be sterilized/reused (compliant with IPAC).
- More items bought in bulk.
- More workshops for people to learn how to fix things rather than throwing them out to buy a new one.
- Eliminate carpets
- Donate items versus disposal
- Maybe a store where you can buy, donate, or exchange office supplies.
- Looks at other departments surplus prior to buy new items.
- Tupperware service provided to staff. Staff drop off dirty Tupperware at the end of lunch and pick up a clean set to take home and pack their lunch with.
- Incorporating a recycling or donation for clothing and shoes at the workplace
- Purchase equipment with end-of-life cycle in mind
- Use inventories better
- Seek suppliers for office supplies who use less packaging
- Ordering should occur with one person- so they can control what is being brought in
- Charge for single-use plastics
- Replace vending machines with water fountains



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- Bigger cafeteria so staff can sit down and use real dishes instead of take-out dishes at their desk
- Refurbishing computers and laptops that are no longer useful to staff, but can be given to organizations
- Making used office chairs etc. available to the public or not for profits, rather than direct in garbage.

Staff responsibility

- Staff take their waste home
- Staff bring their own reusable food and drink containers to work
- Remove garbage bins entirely
- Give staff a budget to supply their own supplies and make the accountable for them.

Technology/innovation

- Technology is being used in a variety of ways to achieve improvements. All these ideas were very popular:
 - Incineration and waste-to-energy
 - Chute systems
 - Automatic sorting
 - Bin systems
- Recycling stations that automatically sort the waste.
- Having photocopier showing you the items you are able to print (having to print it and realize this is an older version that needs to be destroyed)



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- Better printing equipment to prevent too much paper waste.
- Local incinerators instead of landfill.
- Use grey water.
- Making our own compost, aquaponics for vegetable grown and fish production to feed the homeless or people in need. zero-waste. Hiring our own gardeners for farmers market making cost lower for city residents, maybe a low-income free garden.
- Better printing equipment to prevent too much paper waste.
- Compostable bins that compost on the spot with rooftop garden
- Paperless charts (hospitals)
- Sensors that scan items prior to allowing them into bins - indicating which bin they belong in
- Incinerators at all city yards and provide self power for the building and surrounding neighborhood.
- Fuel goes to an incinerator (as opposed to a landfill) for energy production (electric buses and our grid will need it)
- All waste is diverted and used as renewable energy
- A tube-like system, where we just pop our items in the tube and goes into the bins in a garbage room.
- A waste management system that would have a sensor to direct the waste in the proper bin.
- Outfit vehicles so they can collect used fasteners etc to be used later



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- Food waste recycled tubes will vacuum the waste directly from the kitchen to a local storage tank and solid waste staff will collect those to the solid waste processing plant.
- Vermicomposting for our gardens
- Grey water reservoirs on facility roofs
- In-house green bin processing with water/fermentation to extract nutrients and then dehydrate material to reduce weight.
- Waste that can be converted directly to energy to heat/cool using a self-contained HVAC
- Making our own compost, aquaponics for vegetable grown and fish production to feed the homeless or people in need.
- Rooftop greenescapes for community gardening and to reduce energy consumption and emissions
- We need to be more open to new ways to be green and pilot project like Worm bins would be a great start.

Education/signage

- Offer more green initiatives and events for staff as an education idea
- Use intranet to educate more. Have on the intranet an engine that tells staff where to place items. And graphics of what to do.
- Educate staff on where materials end up, for transparency.
- Ask for ideas from the cleaners – they are in a good position to provide ideas.
- Promote green bins and recycling bins with posters around the facility
- Keep people involved. Let them know how any changes have gone and what the improvement in diversion is. Perhaps more surveys from time to time.



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- Enable staff to ask questions of the right people. This should be on a specific intranet site dedicated to waste management at work.
- ‘Ambassadors’ at each facility to help promote the system and get staff to use it correctly.
- Encourage staff to take food home to compost themselves.
- Posters above the bins that have more detail than the signage on the bins.
- A physical example attached to top of recycling stations that explains where to put each part of a coffee cup (cup, lid, sleeve, stirrer).
- Sporadic education days or weeks during the year could help out if not a lot of recycling is done in some facilities.
- Improved bin signage:
 - A short, clear sign on top of each waste stream with large print accompanied by simple graphics indicating the most common sources of confusion when people dispose of waste (e.g., coffee cups vs coffee lids) and a link to a website for more detailed breakdown of ALL items. Try strike a balance between not making the sign a typical passive-aggressive shared kitchen sign or aggressively cheerful. Clarity and practicality are the purpose of the sign.
- All garbage bins should be labelled ‘landfill’. More impactful.
- Have managers checking bins on a weekly basis (and they follow up with staff)
- Household waste pick up days at work (more of a promotion and education thing)
- Regular education updates to make sure staff know of any changes to the system.
- Recycling systems are consistent across sectors, cities, and provinces.



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- Provide feedback to staff re: amounts of waste at each building (local impact) and in each category over time.
- Could do some sort of most-improved etc... competition system citywide between departments.
- Comprehensive social norming campaign so that all staff want to recycle and its 2nd nature.
- More active campaigns on compliance
- Increase awareness of battery/e-waste recycling
- Restaurants in particular need to provide information on the correct disposal of containers and cutlery
- Compulsory education of all city staff and visitors on recycling more waste.
- Make it part of employee conduct - do it at work, more likely will do it at home
- Education of contractors
- I thought it is a wonderful idea that the school taught the children about recycling and the children teach their parents about recycling
- Outreach and awards on Cleaning the capital and adopt a park may raise the profile of such community work
- The city could participate in staff clean up the capital days, cleaning up the trash around buildings/community they work while being paid by the employer
- More education for Long Term Care Facilities and their staff
- Use In The Loop better for education



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- Each City building should have a Cleaning the Capital Event for the property/ park it's located on/nearby.
- Educate people on the adverse impact of not using the proper bins
- Maybe with hanging signs stating recycling in this direction.

Enforcement/incentives

- Ban any products at the City that cannot be recycled.
- Positive rewards for system usage. .
- Recycling and use of green bin are mandatory
- Mandate better practices in public areas of the city buildings as well as cafes/restaurants in city buildings.
- Mandate restaurants and cafes to recycle and use green bins
- Better monitoring

Environment

- Paint dept has a containment bin for their massive paint totes to catch any spillage to avoid toxic paint spilling into the ravine.
- A better system for cleaning up their paint trucks at the end of the day.

Terminology

- Circular economy and zero-waste both adhered to and staff educated so they know what this means and so they too implement these concepts as much as possible.

Policy



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- Manufacturers and distributors are responsible for the packaging waste and they implement sorting facilities in workplaces (IPR)
- Government incentives for reuse of recyclables that would balance out the cost of landfill space.
- Waste management facilities are paid for by the companies that make the products and regulated by the government.
- Better federal legislation towards manufacturing biodegradable products and mandated recycling at every location.
- Make waste management corporate goals

Keep it local

- Ottawa has its own recycling plant & doesn't outsource recycling.
- Support local businesses, local products.
- Choose suppliers that are local and environmentally responsible

Other

- Need to do a thorough assessment of what is needed at each facility i.e., each one is very different. Not just a waste audit, but look at where all the bins are placed, how many there are, how full they are, collection frequency, cost for collection (i.e., are they paying too much when the bins are collected when not even half full?), ask staff as you go around what they think is needed.
- Clean bins daily
- Wash out green bins
- Need more maintenance staff.



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- Hiring our own gardeners for farmers market making cost lower for city residents, maybe a low-income free garden.

What are some of the common items I throw in the garbage that I wish could be recycled?

Batteries, binders, bottles, cans, CD/DVD cases, coffee cups, coffee lids, coffee pods, electronics, food containers, food waste, gloves (including nitrile gloves), hazardous materials, light bulbs, paper towel, paper, plastic bags, plastic containers, plastic wrap and packaging, single-use dishes and cutlery, stationery, straws, Styrofoam, textiles, thermal paper (receipts), tissues, wood, general plastic, metal, and glass items.

Most common items staff thought should be purchased in bulk:

- Office supplies
- Cartridges and toners
- Bins and bin bags
- Stationary
- Paper
- Soap and sanitizer
- Medical supplies

Items staff would like to see in return/exchange programs:

- Batteries
- Bins
- Books
- Cartridges/toners



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- Coffee pods
- Computer equipment
- Electronics
- Office supplies
- Furniture
- Light bulbs
- Paper
- Tires

Several comments from staff that the Green Exchange program should be expanded and advertised more.

Most popular ideas:

- Collection frequency needs to be improved
- Need to get serious about enforcement and introduce fines
- Improving education
- Eliminate plastics and SUPs (or way less)
- Bin locations need to be improved.
- Many places need more green and recycling bins.
- Procurement needs to improve – more bulk buying, less packaging, no SUPs, more compostables.



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- Need improved corporate recycling programs for more items, such as batteries, electronics, furniture
- Improvements very much needed at cafes/restaurants/vendors in general. Need green bins in cafes etc, need to use compostable packaging, no plastic packaging (or way less), reusable dishes and cutlery
- Need to go paperless.
- Promote BYO reusable items
- Signage needs to be improved everywhere so staff know where to place items. Consistency is key.
- Composting on site
- Offer more green initiatives and events
- Commitment by management
- Stay on budget
- Monitor to measure progress and success
- Remove garbage bins
- Embrace new technologies



Appendix 7 – Public Survey on Engage Ottawa

The following is an excerpt from a report developed by Hill+Knowlton Strategies which summarizes the responses to an online survey hosted on the City of Ottawa’s Engage Ottawa platform from June 1 to July 23, 2020. The questionnaire was completed by 762 respondents. The purpose of the survey was to gather feedback on the current waste management system in Ottawa and how participants would like to see waste managed in the future, specifically looking 30 years ahead.

(The excerpt below may contain formatting changes that are different from the original document. A full copy of the report can be obtained by contacting the City of Ottawa.)

Current situation

Overall, Ottawans are very satisfied with the level of waste services available in Ottawa. However, there are still barriers that people face to increased use of Ottawa’s recycling or green bin programs, including uncertainty around the criteria for each bin type, skepticism around the true destination of the waste, lack of convenience and bin design. For people who live in multi-residential buildings, these issues are often compounded by a lack of availability or the inconvenience associated with having to access communal bins in the basement or garage. Among the other types of waste programs offered by the City, such as the hazardous waste drop off events, there is a discernable lack of communication about the dates and times of these events.

The future of waste management in Ottawa

Ottawans were asked to think big about the future of waste management. In terms of convenience, engagement participants outlined several potential improvements, including: increased frequency, larger format bins, and accessibility considerations such as the use of braille labelling or a standardized approach to bin labelling. Successful models of recycling and green bin programs already in place across Ottawa were noted, including at Carleton University, the University of Ottawa and new LRT stations. Education and behavioural change are essential elements to improving waste diversion rates and overall environmental



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stewardship across Ottawa. Engagement participants suggested ideas that varied, from school-based curriculum to public awareness campaigns on social media. Several other suggestions for improving Ottawa's waste diversion rate included legislative or program changes such as mandatory programs for multi-residential buildings or tax incentives to encourage recycling.

Vision and guiding principles

Participants outlined a number of key guiding principles for a new SWMP. The most cited include striving for a zero-waste future, adopting innovative and emerging technology, eliciting behavioural change and providing an affordable system for all.

Current satisfaction

Overall, Ottawans are quite satisfied with their current blue (or grey) bin, black (or yellow) bin, green bin service and garbage collection service. Among survey respondents, levels of satisfaction ranged between 74% for garbage collection and 90% for the black (or yellow) bin service. Survey results reveal that lower rates of satisfaction are present for some of the other solid waste services offered by the City of Ottawa, including the Take It Back program, the yellow bag program for small businesses, bulky items, and the Trail Road landfill site. Although, in this case, the lower rates of satisfaction are more likely caused by a much lower frequency of usage for these programs.

Recycling programs

Through our engagement with Ottawans, several barriers related to increased use of the blue or black bin programs emerged, including:

- Some participants note that it can be difficult to know the criteria for usage of the blue or black bins. There is a fair amount of uncertainty about what types of plastics, for instance, belong in the blue bin, which can lead to this type of waste ending up in the garbage instead.



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- There was skepticism from some participants during the engagement process about using the black or blue bin programs. Several comments from survey respondents wondered whether the contents of their black or blue bins even become recycled, postulating that they all end up in the landfill anyways.

For many participants, lack of convenience is a major barrier to increased usage of the blue (or grey) or black (or yellow) bin programs. For those who use curbside pickup, there are often issues with the small size of the bins provided by the City. Even in multi-residential buildings, this is often an issue for participants who cite that yellow and grey bins can be too small for their needs.

- Other barriers mentioned by survey respondents include the need to wash recyclables, as well as the frequency with which their blue or black bins are collected. Both barriers can often lead participants to put recyclable materials in the garbage.
- Design issues with the blue and black bins are also a nuisance for some in Ottawa. Several survey respondents mentioned instances where materials from blue or black bins are left strewn on their roads or across their neighbourhoods. This was a concern echoed in the focus groups, particularly for people with disabilities who have to navigate bins or waste left on City sidewalks before or on collection day.

Among survey participants who are very proactive users of recycling and green bin programs, there were concerns around contamination if they improperly placed an item in a wrong bin. For these individuals, it often made more sense to place their waste in a garbage bin if they were unsure of where it went.

Many individuals who reside in multi-residential buildings face accessibility issues that prohibit them from using the blue or black bin programs in their buildings. In some cases, the building does not provide any kind of recycling service, and therefore residents need to bring their recycling elsewhere, or in other cases, the service is often challenging or inconvenient to access (i.e., located in a garage or basement).



Green bins

Currently, over half of the City's waste is composed of organic materials that could be diverted from the landfill through the green bin program. The green bin program, rolled out in 2010, is used by almost 80% of curbside households, but only one-third of multi-residential households. For many residents of multi-residential buildings across Ottawa, there is not even an option to use the green bin program. Only 36% of the more than 1,700 multi-residential properties serviced by the City of Ottawa are registered for the green bin program. As it stands in the Province of Ontario, multi-residential property owners are not required to provide green bin service, however there are increased diversion targets from the province of Ontario that many multi-residential homeowners are required to meet.

Results from the survey suggest that, while a majority of Ottawans who avail of the green bin program are highly positive about the program, there are several barriers that prevent people from using it even more, including:

- Many engagement participants noted the smell and bugs or vermin that are attracted to their green bins, particularly during the summer months. For some, this is a hindrance that prevents them from using the green bin as often as they would like.
- The design of the green bin was another barrier cited by several participants. Often, the bins can become heavy or difficult to navigate in the winter. Another participant cited how vermin have continually managed to break open their green bin.
- Many engagement participants who reside in multi-residential buildings do not have the ability to access the green bin program. In most cases, the building does not offer the service, or they lack the space necessary to store their bin or organic waste.

Other solid waste programs

Survey respondents were asked to consider their biggest challenges to using the



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hazardous waste events offered by the City. The most cited reasons include:

- Respondents never hearing about them in time
- Dates are never convenient for respondents
- The events are too far away from where respondents live

Survey respondents were also asked about their biggest challenges to using the Trail Road landfill site. Almost half of respondents indicated they do not use the site more often because they have no reason to go, while almost a quarter of respondents were unsure of what the site even is. Other respondents pointed to challenges including the site being too distant from where they live, and lack of transportation.

Among people with disabilities, these types of waste services can be especially difficult to navigate and use, with one individual with a disability noting that “the whole process takes weeks to get organized and implemented” since they need to find someone willing to handle the waste and transport it to a hazardous waste event.

Recycling and composting in public areas

Parks and public spaces are important considerations for the new SWMP. Currently, the City of Ottawa provides solid waste services to over 900 parks and 375 city facilities.

However, it was noted by several survey respondents that, while garbage bins may be available in public spaces and parks, there is a lack of recycling and compost bins. As a result, many garbage bins can become overflowing with waste. Instituting more bins for organic waste and recycling could go a long way in diverting waste from the landfill in public spaces.



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Table 1 Summary of ideas about how to increase uptake of recycling and composting in public spaces and parks

- Increase the number of bins throughout public spaces and parks
- Utilize a standardized system, such as colour coding, for each type of bin
- Locate green bins prominently in dog parks and walking trails for pet refuse
- Standardize the type of bin across the City (e.g., City facilities, parks, educational institutions, commercial establishments)
- Provide information on the location of bins using the Household Pickup Garbage / Recycling Weekly Schedule
- Allow people to mix recyclables in bins
- Place blue bins prominently at all sports fields
- Use Molok style, or similar, bins which are designed to keep animals and bugs out
- Clear images of what 'can go in the bin'
- For every garbage bin, ensure there is also a bin for recyclable and green bin material
- Place waste containers near the exits of City facilities
- Increase the frequency that public bins are emptied by City staff
- Use by-law to threaten fines for the improper use of bins
- Use City staff to educate people about the proper use of bins
- Place black boxes at community mailboxes
- Utilize multi-lingual signage and braille to ensure accessibility

Considering the future of waste management in Ottawa

Engagement participants were asked to think big and brainstorm priorities for the future of waste management in Ottawa. Many respondents reflected on their current situation and developed ideas for consideration in a new SWMP.

Convenience

To help facilitate the increased use of the recycling programs offered by the City, several participants suggested increasing the frequency of bin collection. This was a common theme across respondents, regardless of curbside or multi-residential service. When bins become full, people often default to placing items in the garbage that could be recycled.

Furthermore, another frequent suggestion from respondents centered on the creation of



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one central bin for all recyclable material to avoid cross contamination.

During the focus groups, it was mentioned that a potential solution to material falling out of the bins on collection day could include putting a lid on blue or black bins.

Another common point raised by many survey respondents was the limited scope of what could be included in the blue or black bin programs. Many comments centered on the desire to see other common items included in the City's recycling program, including:

- Styrofoam
- Plastic bags
- Plastic wrap
- All forms of plastic packaging
- Batteries
- Old clothing

Convenience was also a common theme when participants discussed how to improve the uptake of the green bin program across Ottawa. Similar to the recycling programs offered by the City, increasing the frequency of green bin collection could help to alleviate concerns that many people have about pests and vermin, especially in the summer months.

Another potential solution touted by several participants was introducing larger format green bins, like what is seen in other jurisdictions.

Across City facilities, public spaces and parks, there was a sentiment among engagement participants that there are not enough opportunities to recycle or compost. This is particularly pertinent for schools where there is an opportunity to develop habits among students. Inconsistency in bin types across the City was also cited by several participants. Especially for Ottawans who are low-vision or blind, there needs to be a standardized approach to designing and labelling bins in public spaces.



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Some models of successful recycling and composting programs in public spaces were mentioned, such as:

- Carleton University
- New LRT stations across Ottawa
- University of Ottawa

Education and behavioural change

Behavioural change and education are key to improving the uptake of the City’s recycling and green bin programs.

For many survey respondents and dialogue participants, education is the key to effecting change and improving Ottawa’s waste diversion rate. To that end, a number of suggestions were provided, including:

- Neighbourhood initiatives such as repair workshops or tool libraries (e.g. the Ottawa Tool Library).
- School-based curriculum on waste diversion and composting.
- Replicating successful examples of community outreach, such as the Green Team from the Multifaith Housing Initiative.
- City “ambassadors” in public spaces to advise people of the closest location where they can recycle or compost in public spaces or City facilities.
- Educating residents about the effectiveness of freezing organic waste to minimize smell and reduce vermin and pests.
- Creating awareness around the new rules for green bins, including the ability to place waste in plastic bags in the bin.
- The benefits of backyard gardening.



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Other participants felt that the City could employ more suggestive messaging to provoke behavioural change, such as:

- The use of the term “landfill” on garbage receptacles in public spaces, rather than garbage or a visual symbol.
- Exposing people to images of the Trail Road landfill or opening the site for public tours.
- Using clear bags in lieu of blue or black bins so that collectors can more easily reject contaminated items.

For many participants during the focus groups and dialogue sessions, it was suggested that the City improve their education and outreach efforts to clarify the criteria and rules around the green bin and recycling programs. For instance, it was noted during the focus group with JA Ottawa that many international students are at a disadvantage when it comes to awareness of recycling and often do not know of any of the City of Ottawa resources available. During the focus group with the CNIB, there were frustrations among members of the blind and vision loss community around the lack of braille and other forms of labelling to clearly distinguish what goes in each bin.

Improved diversion

When asked about how much more they would be willing pay for an improved waste management system that diverts more waste from the landfill, almost 40% of respondents indicated they would be willing to pay between \$50 and \$150.

Overall, consultation participants across all forms of participation hoped to see an improved diversion rate in Ottawa. Many indicated that this needs to be accomplished through extensive civic engagement and education, particularly among younger populations, to create a sense of urgency.

Secondly, participants outlined that can only be accomplished through improved access and uptake of recycling and composting programs, including the blue, black and green bin programs.



Vision and guiding principles for a new SWMP

While 2052 may seem a long way off, it will arrive faster than expected. Things like building a new landfill, expanding processing capacity for organics (compost), and exploring new technologies can take 10-15 years to plan and implement. Developing a Waste Plan will allow Ottawa to consider policies, programs, and initiatives aimed at reducing, reusing, and recycling, and managing the waste that remains, all in a strategic way that incorporates the priorities and concerns of residents and stakeholders.

Table 2 Summary of ideas for a future state of waste management in Ottawa

- Encouraging waste diversion through bag limits or fines for exceeding garbage allotment
- Mandatory green bin programs for multi-residential buildings
- Penalties for not recycling or composting
- Incinerate waste for energy
- Restaurants and businesses divert all their waste
- Producers are responsible for recycling the packaging they produce
- Focus on zero waste and a circular economy
- Improved education and awareness so people are aware of how to use recycling and green bin programs properly
- Keep waste processing local
- Encourage producers to reduce the amount of plastic packaging
- Find local markets for recycled goods
- Drop off sites for recyclable materials
- Green collection vehicles
- City-wide ban on single use plastics
- Reduced collection of appliances and large items that could be reused
- Reuse and recycling of building materials
- Automated bin collection service

Striving for a zero-waste future

Aiming for zero waste (next to no waste sent to the landfill or incinerator) was outlined as one of the most important guiding principles to engagement participants.



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Many voiced support that this is an area where Ottawa could emerge as a leader. This means the need to set bold and audacious goals and create momentum on issues such as a single use plastic ban, and the circular economy. One suggestion raised by the MHI centered on hosting workshops about repurposing and reusing old materials and hosting more community gardens throughout the city as a means of educating children about where their food comes from. The Haven was mentioned as an initiative from the MHI that has successfully integrated community gardens and other sustainable features in its design.

Another participant during the focus groups raised the point that during COVID-19, it has become increasingly more commonplace to use your own cutlery and dishware. This type of behaviour change is seen as one to embrace and replicate.

Cost and affordability

Many engagement participants felt that the average citizen should not be responsible for shouldering the costs of any system improvement. Instead, several participants noted that costs should be, primarily, the responsibility of the producers and businesses responsible for producing the waste.

This is in line with several respondents who noted that a more cost-effective approach to waste management is to reduce the amount of waste produced in the first place.

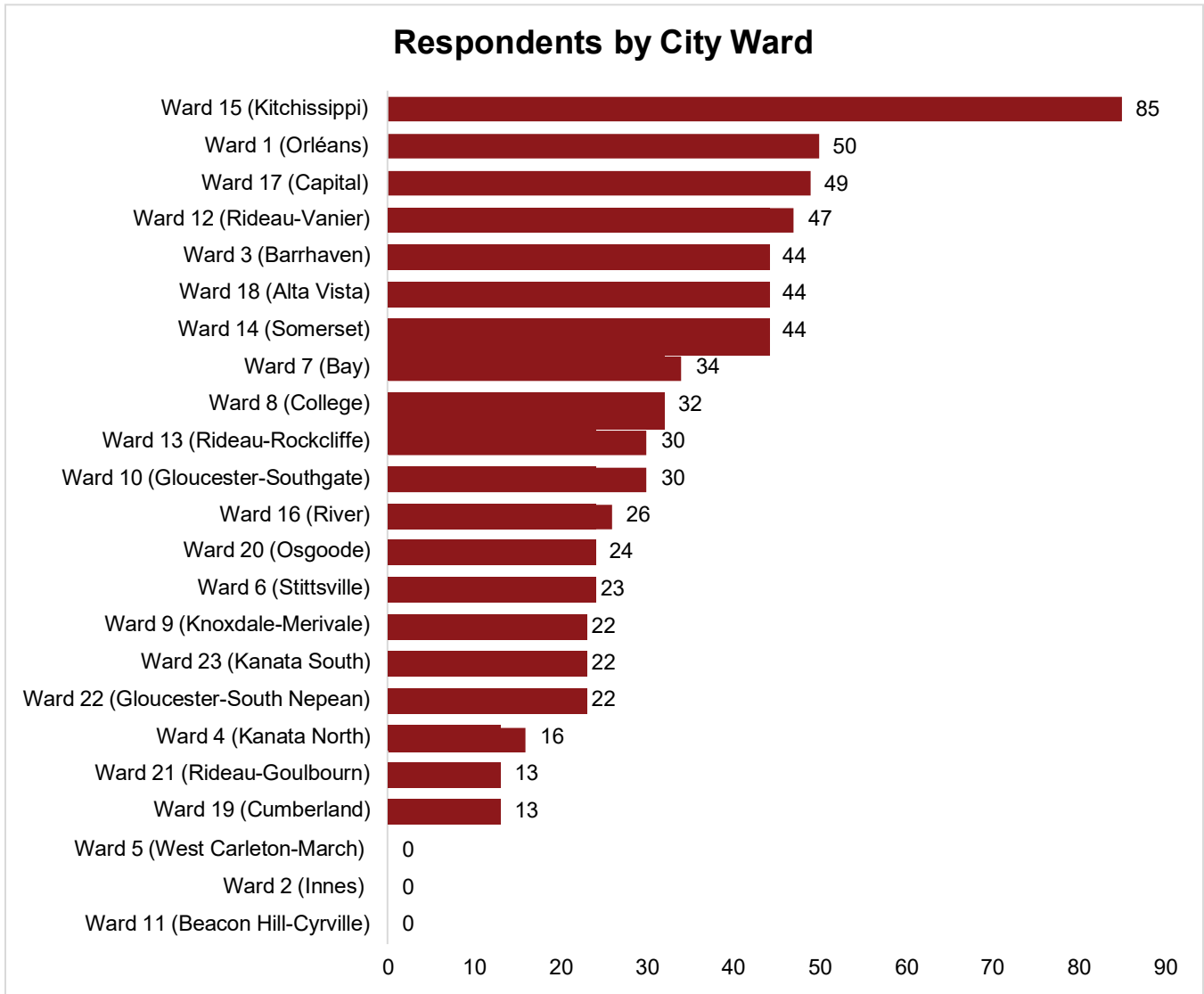
To that end, charging residents per bag of garbage or “garbage policing” to ensure residents are not throwing away recyclable items were touted by participants to reduce overall use and waste was brought up by several respondents.



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Demographics and Statistics of Engage Ottawa Survey Respondents

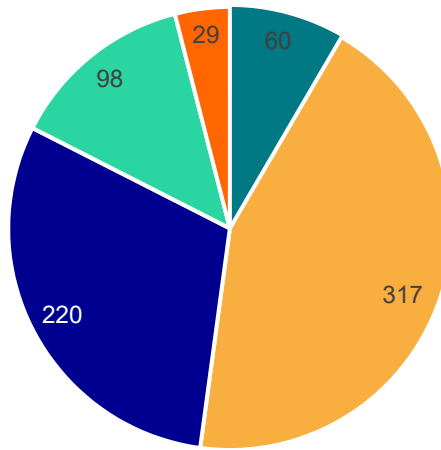




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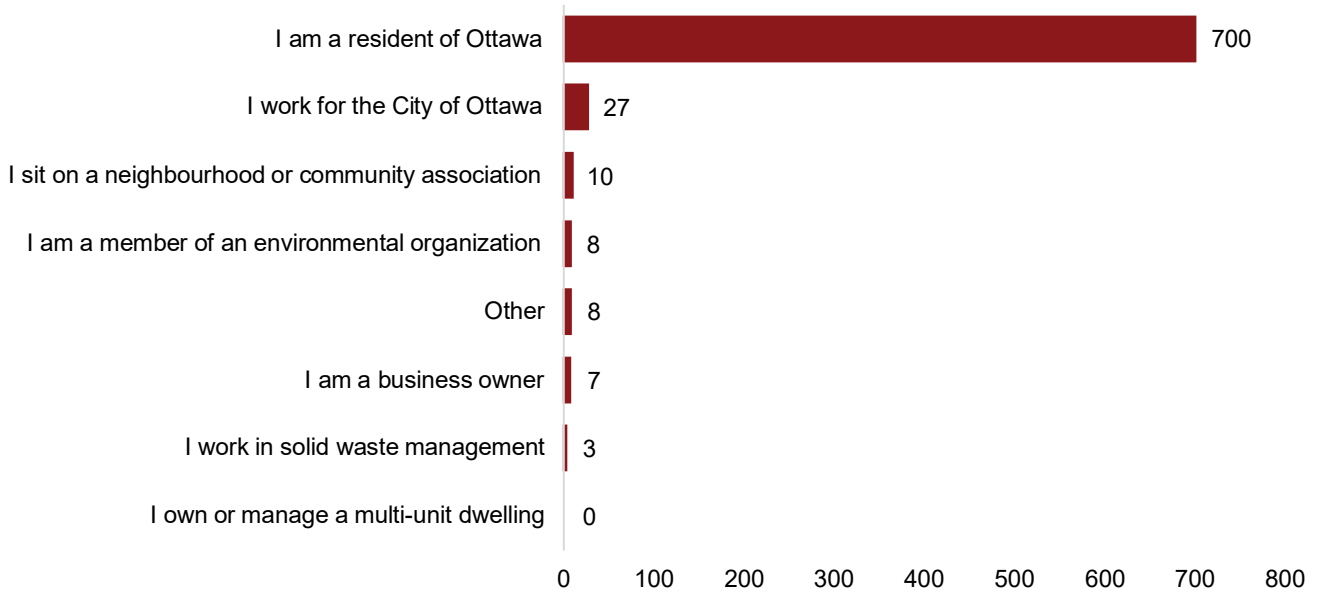
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What is your age?



■ 0-17 years
 ■ 18-24 years
 ■ 25-44 years
 ■ 45-64 years
 ■ 65+ years
 ■ Prefer not to answer

What best describes you?

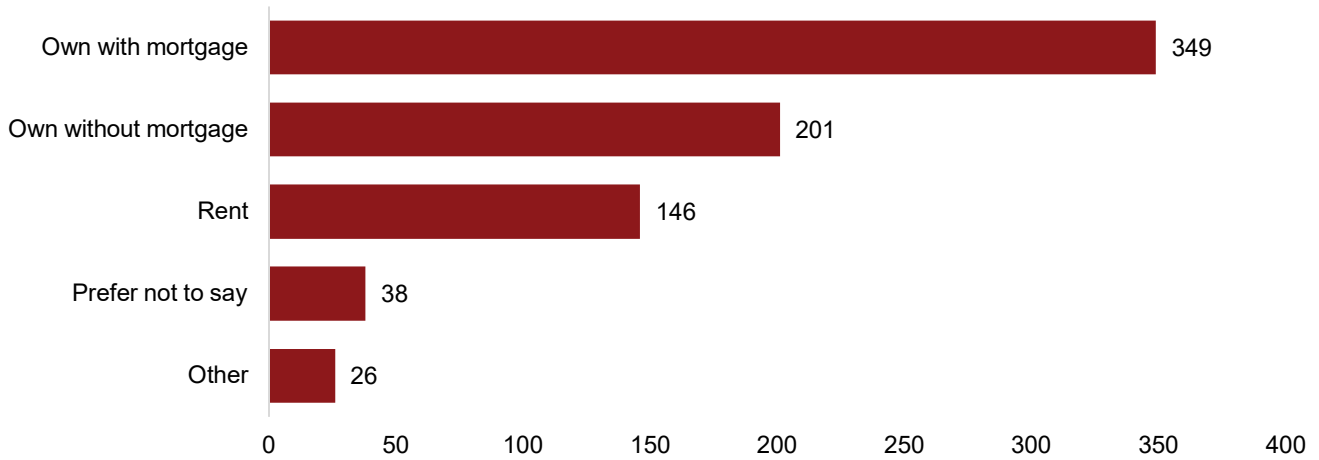




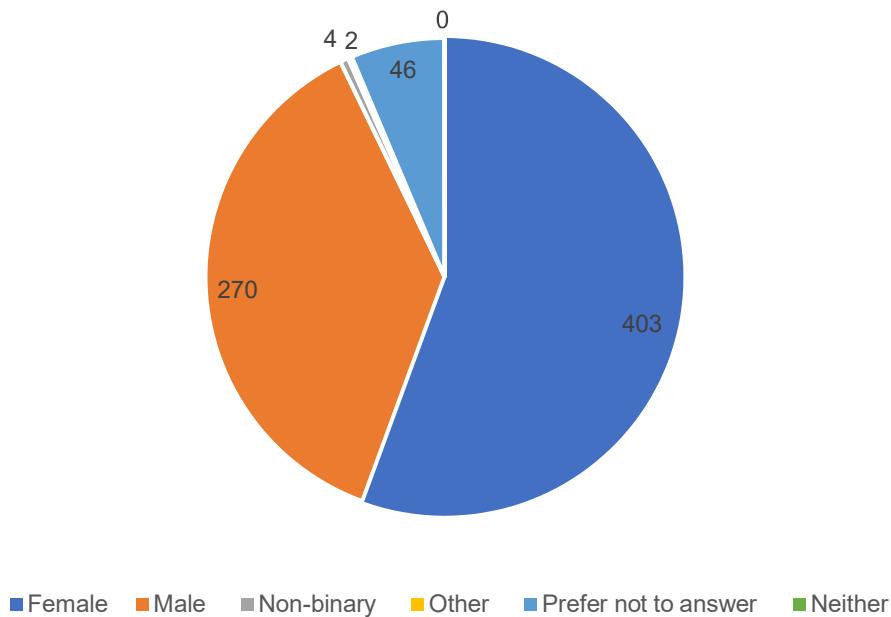
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Which of the following best describes your housing situation?



How do you identify?

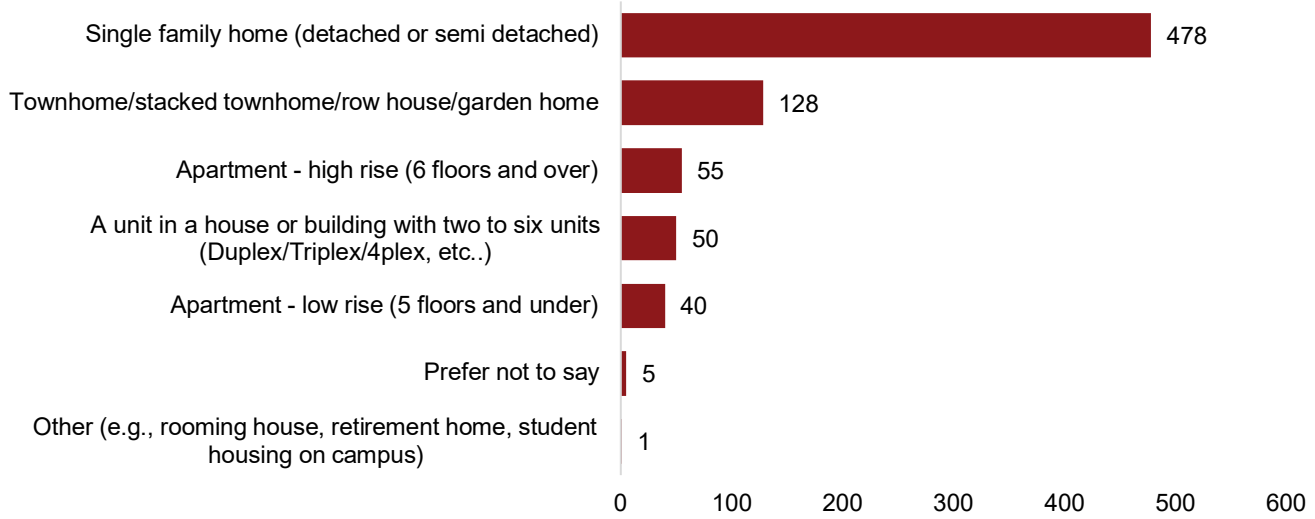




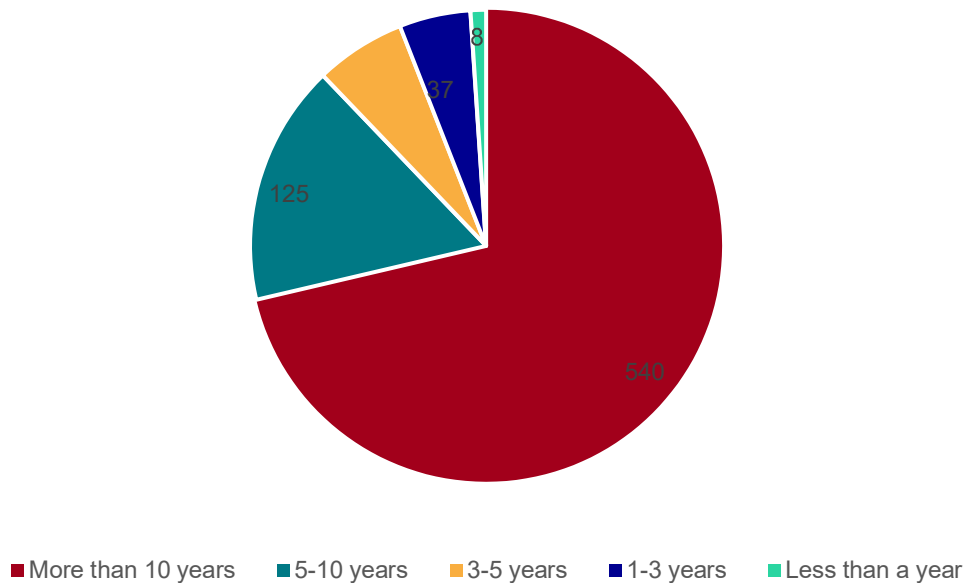
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What type of property do you live in?



How long have you lived in Ottawa?

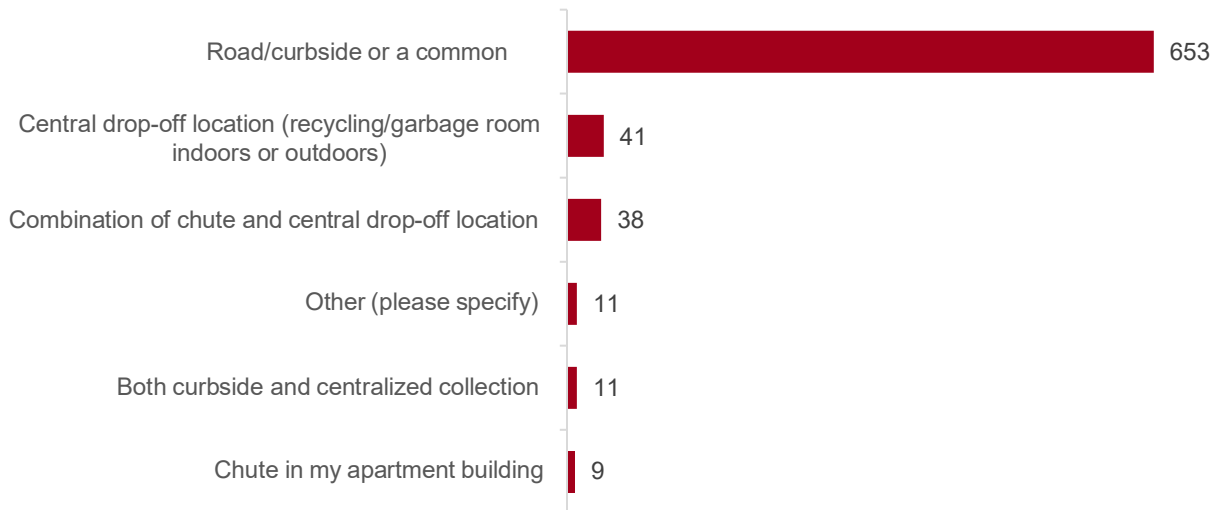




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How do you put your garbage and/or recycling and organics out for collection?



Below is a summary of ideas from survey respondents and focus group, dialogue session and key informant interview participants about how to improve waste management in Ottawa. Ideas are divided into public parks and spaces; curbside and multi-residential; partner programs/non-City waste programs, and City waste programs. Ideas are further divided into categories and sorted by frequency (from most- to least-popular).

Public parks and spaces	
Category	Idea
Waste reduction	1. More recycling and green bins available in public parks and spaces
Education	2. Clearly marked bins and signage
Waste reduction	3. Increase frequency of bin collection
Waste reduction	4. Separate bin for pet waste in public spaces and parks
Technology	5. Pest and vermin proof bins in public spaces and parks
Technology	6. Larger bins in public spaces and parks
Education	7. Encourage people to hold on to their recycling or green bin items for disposal at home



Solid Waste Master Plan

Plan directeur des déchets solides

Changes to regulations or by-laws	8. Enact standard rules for garbage and recycling containers across the City (e.g., accessibility standards, size, allowable items)
Education	9. Place City of Ottawa staff in public spaces and parks to inform people of recycling bins and enforce recycling
Curbside and multi-residential	
Category	Idea
Education	1. Improved awareness about what can be recycled or put in the green bin (i.e., on the side of bin, broader media campaigns)
Changes to regulations or by-laws	2. Bag limits for residences and businesses and fines for going over
Waste reduction	3. Recycling program for Styrofoam (e.g., in blue bin)
Waste reduction	4. Recycling program for plastic bags (e.g., in blue bin)
Changes to regulations or by-laws	5. Pay as you throw waste system (e.g., bag tags)
Waste reduction	6. Allow diapers in the green bin
Enforcement	7. Mandatory green bin program for multi-residential buildings
Waste reduction	8. Reduction in frequency of garbage pickup
Enforcement	9. Use of clear bags for garbage to allow easy auditing of contents
Waste reduction	10. Single bin recycling (i.e., combine blue and black bins)
Education	11. Multilingual communications campaigns about recycling and green bin programs
Technology	12. Green collection vehicles
Waste reduction	13. Program for recycling old clothing
Enforcement	14. Fines for not using green bin program
Education	15. Community and grassroots programming (e.g., community gardens, curriculum for youth about recycling)
Education	16. Communications campaigns that make use of pictures of the landfill or other 'sticky' messaging
Reuse	17. Designated dates to leave bulk household items on the curb for recycling
Changes to regulations or by-laws	18. Reduce what is allowed for pick-up (e.g., no bulky items, construction waste)
Reuse	19. Drywall recycling program



Solid Waste Master Plan

Plan directeur des déchets solides

Changes to regulations or by-laws	20. Mandate packaging to a description of how to recycle item (e.g., in blue or black bin)
Education	21. Educate homeowners about backyard composting
Education	22. Promote natural landscaping
Changes to regulations or by-laws	23. Regulate garbage chutes in multi-residential buildings to be used exclusively for garbage so residents are more incentivized to use green bin or recycling programs
Technology	24. Automated garbage collection
Waste reduction	25. Curbside pickup of hazardous materials
Technology	26. Integrated accessibility features on bins (e.g., braille on blue, black and green bins)
Technology	27. Standardized garbage container
Waste reduction	28. Improve water quality at Ottawa Community Housing facilities in order to reduce the dependency of residents on bottled water

Partner Programs/Non-City Waste Programs

Category	Idea
Reuse	1. Consumer drywall recycling
Waste reduction	2. Drop off location for leftover building supplies
Waste reduction	3. Recycling program for lightbulbs
Waste reduction	4. Expansion of teracycle program
Reuse	5. Establishment of second life programs run by organizations to give garbage a new life
Reuse	6. Battery recycling program

City Waste Programs

Category	Idea
Changes to regs/bylaws	1. Waste to energy incineration
Changes to regs/bylaws	2. Regulations on the type of single use plastics available for use in Ottawa
Technology	3. Manage waste locally
Technology	4. Production of renewable natural gas
Waste reduction	5. Establish neighbourhood recycling/green bins
Technology	6. Gasification of waste
Waste reduction	7. Central composting facilities
Regulations	8. Allow more establishments to serve people with their own containers



Solid Waste Master Plan

Plan directeur des déchets solides

Changes to regulations or by-laws Reuse	9. Restrict packaging used by local businesses that is not recyclable by the City
Changes to regulations or by-laws	10. Make compost from green bin program available for citizens
Changes to regulations or by-laws	11. Larger deposit on recyclable drink containers
Changes to regulations or by-laws	12. Mandatory sorting of construction waste
Technology	13. Deposit on plastic products
Waste reduction	14. Find markets for recycled waste and return money to waste management system
Changes to regulations or by-laws	15. City leadership in championing waste reduction across the Industrial, Commercial, and Institutional (IC&I) sector
Technology	16. Deposit on items with hazardous materials to encourage recycling
Technology	17. Mechanical-biological treatment facility
Technology	18. Use of Plasco type facility to generate energy
	19. Enact system for dealing with contaminated soil at the Trail Road facility



Appendix 8 – Equity and Inclusion Groups

The City of Ottawa uses an Equity and Inclusion Lens to ensure that it is consistent and coherent in its efforts to move equity and inclusion forward in its services and to the benefit of the city. Engagement on the Waste Plan with equity and inclusion groups took place in July 2020 and included three virtual focus groups with organizations representing older adults, youth, persons with disabilities, and immigrants. In addition, key informant interviews were held in July with two individuals representing mobility justice issues and affordable housing.

The following are the meeting and interview notes:

Key Informant Interview with a Representative of the Ottawa Disability Coalition

Current challenges

Hazardous waste events

- I am disabled – Hazardous Waste is a pain
- First of all, you need to get someone to get to handle the waste
- The whole process to take weeks to get organized and implemented
- For me, I've only used it once to get rid of paint and hazardous caustic

Curbside collection

- Regularly use blue and black and green bins
- I try to recycle as much as I can
- Have to someone to bring bins to the curb
- Blue and black bins in the house so that we can divert paper into right place



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Plan directeur des déchets solides

- Blue bin fills some pretty fast, especially after going to the grocery store
- Have trouble knowing what goes where (in what bin)
- City has website, with a navigator for waste services
- Website is very helpful
- Live in Lowertown east, near Ottawa Housing apartment building. Lots of garbage from that building
- Every week, people pile up furniture outside from bed bugs... people should be killing bed bugs, instead of throwing out furniture
- Green bin barriers include rodents
- City should have some kind of task force to look at apartment buildings
- Need to control the problem. City could have some kind of squad to come out and help eliminate vermin.
- The green bin has wheels.
- The bins are emptied and thrown out on the sidewalk. Sometimes the bins are thrown on the sidewalks. These emptier bins are a bigger issue than the scooters. Especially in the winter. Try to avoid going out on garbage day.

Solutions

- Always a number of garbage receptacles around in parks
- Parks are not a problem. It's the garbage receptacles on the street. For instance, there is a receptacle across the street from me at a bus stop, people throw in dog waste. City doesn't empty the bin for three weeks. People could be putting into in the green bin. Dog owners need to be educated.



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- City has bent over backwards to make it as easy as possible to get rid of their waste. People don't divert as much as they can because there's no opportunity to do so, and second, people are stuck in routine.
- The recycle program – people don't know where to recycle. No awareness, easier to throw it out.
- Need to advertise more about what goes where.
- How to get people to do it more often? “you can lead a horse to water, but can't you force them to drink”
- City has a plan for disabled people who can't shovel their own walks/driveways. Could offer that program in non-wintertime and help people to recycle or green bin or grass cutting.
- Lots of new Canadians around here. English and French are not languages around here. Farsi and Swahili most common used languages around here.
- Tried to get a community garden in the area. Had the City on our side, and also community organizers, City had reversed policy about gardens in the park. Lots of neighbourhood opposition to community garden, because of same reasons for green bin (e.g., vermin, mess).

Future thinking

- Things are overpackaged.
- Have to legislate. Producers have to be responsible for entire lifecycle.
- Bottled water is big in this area because water quality is bad.
- Need to start to legislate, people won't be responsible otherwise. Or else, start grassroots, writing campaign – need a strong united voice



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- Need the community associations more involved. Give them responsibility on this issue. Let them see how complicated the issue is.
- If we don't correct it, we'll be buried in our own waste.
- You have to remember, that you have to make it easier for the right choice... Make it cheaper for people
- Can't shame people.
- Could utilize explanatory video, what the situation is and what the future could look like. With a graphical representation.

Key Informant Interview with a Representative of the Multifaith Housing Initiative of Ottawa

Current challenges:

Blue and black bins:

- All properties use black, blue bins often
- It's a challenge to get residents to use the right bin
- When people are not recycling, it means we have 2 pickups a week
- Difference between older and newer properties, older properties are better at recycling
- Lots of newer Canadians at newer properties who don't have knowledge
- I grew up in 60's and watched progression of recycling
- Limited resources: We tried to have a green team for education, with gaming. But, no capacity to expand
- Green team – group of volunteers who organized info nights, to learn about recycling.



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Plan directeur des déchets solides

- Green team – limited turnout, if we had capacity to expand it and involve kids, could've taken off and been more useful. Lots of volunteers, but interest fell off. Need a dedicated staff person with dedicated time.
- Seniors in apartment buildings are better at recycling

Green bins:

- At our older buildings, no specific program. Encouraged interested residents, and they could keep their bin outside, and gave ppl small compost containers. Didn't generate much interest. Barrier was bringing bin outside, down to the street. Could only organize individual bins.
- Current barrier – increased rat problem around our buildings. Put a damper on people's composting. Not much of an issue at newer buildings, only older buildings.
- Newer buildings: haven't implemented new program yet. Wanted to ensure residents handled recycling first. Have nice garbage rooms with a door for organics. Wouldn't be a huge barrier, b/c they bring recycling down.
- What would help? City should send out resource person to diff properties once a month. Organize a fun recycle night for youth and kids. City wide, be part of the City's green team.
- Need to start young because they are responsible for bringing garbage to the curb. Education can't rest with housing provider, needs to be with the City.
- Most common languages are EN, FR and Arabic, and Spanish. Need a variety of languages spoken by facilitators, as well as participants.
- Important to talk about what's important in life. Waste management is not just garbage, need to talk about how you live your life. Everything you buy has a consequence. Consider life cycle of products, and whether it improves the quality of your life.



Solid Waste Master Plan

Plan directeur des déchets solides

- City being supportive of people who collect garbage – ppl who go out night before garbage days, bit of an underground economy, but they also need to be recognized as valuable members
- Free Ottawa days are also good and need to be supported. Supporting social enterprises.

Solutions:

- Compost less in summer because of personal composting. This should be encouraged. Education about what goes in backyard composter.
- Curbside – always room for improvement. Focus needs to be placed on Multi-Res
 - Find a way to deal with rats and vermin, and fear of rodents.
 - Education has to be in-person, posters are great, but doesn't replace having someone there to show what goes in each bin
 - About developing habits, not about environment
- People change their habits if its convenient
 - For example, not using cash during COVID
 - Debit limits were upped
 - The more convenient, and easier to understand, for example does milk container go in black or blue bin. Having symbols on containers. Or having all recyclable material in one bin (sorted by city).
- Hard to encourage people to use green bin. Some products like bin liners help, but cost factor attached to that.
- For retrofitting older buildings, need to consider green bins. Need to have grants to encourage this, to build garbage enclosures with trap doors.



Solid Waste Master Plan

Plan directeur des déchets solides

- Could also facilitate composting on site at MR buildings, for example in a community garden. Could reduce volume.

Future thinking:

- Changing the way we use products and what we purchase
 - Movement will be led by people who care about the environment, needs to start with manufacturer
 - Back in the general store, if you only need 2-3 screws, why do you need a package of 20? Stores need to be more mindful of the environment
 - Need to focus on quality products,
- Repurposing – include education piece on entrepreneurial aspect. People could learn to look at something before they throw it out. Workshop idea to go out to where people are, and work with tenant and coop members to do programming around re-using items.
- For e.g., community gardens. Could use many products to put seedlings in, like old tin cans. Get kids to do that. Prevents something from being manufactured and purchased.
- Start with community gardens, all of our food comes from far away... you can see where food comes from.
- Keep food consumption local, i.e., consume food in-season

Focus Group Session with the Canadian Association of Retired Persons (CARP)

City of Ottawa Focus Group – CARP

Date: July 23, 2020



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Round 1: What is your experience with waste management in Ottawa? What services do you use (black bin, blue bin, green bin, Household Hazardous Waste, Take it Back!, yellow bag)? What challenges do you face? What could we do better?

Respondent 1: I live in a multi-residential home (condo) but when our city made the green bin mandatory, our condo said no because we can't get people in this building to use the bins we do have, properly. I offered to meet everyone in the building to explain the recycling system in the building, but that never happened. Right now, it's limited and there's limited interested in our condo management group.

Respondent 2: I don't find it that big a problem. We put the stuff in the green bin and also use the black and blue bin. It seems to work okay and it doesn't seem to be any major inconvenience at all. We have one neighbour who always knows what's supposed to go out on the curb, so we just do whatever she does. If we didn't have her to look at, we wouldn't know what to put out on the curb.

Respondent 3: I live in old Ottawa south which is "environmental light". We use our green bin, black bin, and blue bin. If you live in a private home (curbside), you wouldn't necessarily think about the challenges of multi-res. We've got to look down the road here. What are going to be the problems in the future? The amount of packaging is disgusting because it's a huge amount of waste.

Round 2: If we don't recycle, reuse, or reduce more, our landfill could be filled by 2041. How can we make it easier for people to recycle and compost? Why do you think people don't compost or recycle more? Are those reasons different when you're in a public space, like a park or city facility? Why? How can we encourage people to reduce, reuse or refuse more?

Respondent 1: I honestly think maybe having the city reach out to multi-residential buildings to encourage them to start using the green bins. More work has to be done here. Do education work for a year and then make it mandatory. There are a lot of individuals in multi res buildings who would use a green bin if you had the option to or knew what the uptake would be on it. If you look at cities like San Francisco that has a much better diversion rate, they made it



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mandatory. There's a fair amount of turnover in this building and maybe people are coming from different cities or provinces.

Respondent 2: Maybe the best approach is to have people in a given block, get to know who their neighbours are. You can help your neighbours know what to put out and help them actually take it to the curb. What are the really useful models around the world that we can copy? Countries like Denmark and Norway that seem to get everything right. I'm sure Canada is not the place to look when you talk about managing solid waste. Our problem is we look at the US and we pat ourselves on the back because we are better than they are. You have us weighing in on this and we are ignorant on what's working better than what's working in Ottawa. What about the idea of legislating certain things – some cities have outlawed plastic water bottles. I find it's an annoyance anyway and I don't buy them (I use a filter). Taking a bit of it out of our hands and making some legislative changes could be beneficial in actually creating change.

Respondent 3: The seniors' issue is going to become a bigger issue as the population continues to age. We have a cottage in Lakefield and if you don't put the right garbage in the right bin, you're literally shamed. The recycled stuff is in a clear plastic bag so you can see what's in there. Could we not borrow the idea of cigarette packaging and use pictures with shock value? You are being wasteful with stuff that could easily be recycled. I ordered something from the Bay that had excessive packaging. What are we leaving the next generation?

What to do to make it easier?

Respondent 1: in Japan, they don't have any public garbage cans, so people have to carry around their garbage home with them. I do find it interesting that they can collectively be responsible for their own trash. I like the idea of getting rid of bottled water or Styrofoam packaging. When you see trash floating around in the parks, Styrofoam is damaging. Distribute easy digestible information to multi-residential buildings about recycling and green bin use and what to put in each bin (e.g., this is where your milk carton goes).



Plan directeur des déchets solides

Respondent 1: you don't really have to do that education in single unit homes anymore in comparison to multi-residential housing. There has to be more forced cooperation by the building management companies.

Respondent 2: It strikes me that is the easiest thing in the world for the buildings to say it's the tenant's problem and for the tenants to say it's the owner's problem. You have to legislate this stuff. I think in the case of multi-residential, you can educate – there is no real motivation to comply unless it's forced compliance. You might as well burn the money it is going to cost you to educate people. I think if you had stronger neighbourhoods, that would take place organically. There's an awful lot of areas where we need to be building stronger neighbourhoods to cover not only this issue but others as well. How would we create this sense of community? – basically it's making a point of going around your neighbourhood and talking with your neighbours. It's basically the idea that everybody knows everybody. If people are aging, other neighbours can pitch in and do some things for them. Creating that sense of community and shared responsibility is key.

Respondent 3: Most of the stuff in the packing you get is recyclable. If you're in a single-family home, it's easy. A lot of it is sort of an educational process. Could you provide messaging about packaging? Or what about doing a campaign with community newspapers? Appeal to them to do a story and include a picture because a picture is worth 1,000 words. For multi-residential buildings, have big posters, pictures, informative graphics (e.g., explaining where things go). Make it easy for people. I've been in Japan and I was actually just staggered by the lack of garbage. It was incredible. The train station was spotless. You couldn't find one piece of garbage on the street. If you dropped a piece of garbage you were kind of shamed for it. How do you engage a younger generation? Maybe they don't get where the stuff goes. It's an education process. It's getting people to be responsible about what they're throwing out. With packaging, it's a reminder of what can go in each box that can actually be recycled.

Round 3: There are lots of ways we could improve waste services in Ottawa. This could include reducing our packaging or recycling more, encouraging people to reduce or refuse products that are single use, making it easier for people to recycle and compost in parks or public areas, focusing on customer service, trying to make the system



Plan directeur des déchets solides

affordable for households, or using new technologies like waste to energy or chemical processing. Are we missing anything important that we should be considering? What is most important to you about the future of waste management in Ottawa? Thinking ahead 30 years, what does waste management look like?

Respondent 1: I don't think people realize how much it costs to build a new landfill and what impact that's going to have on people's lives. It's not that far out into the future. I know Vancouver did a lot with upcycling. I don't know whether or not that was successful or unsuccessful. I'll be curious about the producer-generated stuff. That could really help produce a lot of stuff that is going to the landfill. The overpackaging is so annoying. Sometimes packaging is not environmentally friendly or senior friendly. It's not a far in the future problem. We would have to start taxing fairly early to create a new landfill site.

Respondent 2: I lived in Europe 35 years ago and one thing that struck me there was how little packaging, especially of plastic there was. I'm sure it's even less now. I don't understand why we have to overpackage everything here. The problem is the legislators are asleep at the wheel because the public doesn't demand it. Maybe that's a direction? Throwing things in a different bin, I don't think is the right answer. We should be cutting down on the garbage we don't need in the first place. Create a sense of urgency. What would cause them to be engaged? – one place you can start is the schools. Often times, kids lead the parents, not the other way around on these issues. Use a grassroots approach. Things are going to happen organically if you use a grassroots approach. It has to come from the bottom up, not from the top down.

Respondent 3: my son and his girlfriend live in Vancouver and as much as upcycling might be good for the enviro; if you don't own a car and you get a big package, you can't take it anywhere else. If you are a senior and have to take your packaging and garbage somewhere, it can be difficult. Is the city going to pay for taxi services for seniors? Also, some students have bicycles, so how are they supposed to dispose of all their stuff? There are biodegradables. Can we get corporations to use biodegradables? Get the younger generation on our side. Use a picture to show what we are talking about. Many people have not been to waste facilities, so they don't know what that looks like. You could help show them: Here's where stuff goes and here's what happens to your garbage. Talk to people about their



pocketbook and what they want to leave for the next generations. Educate people about the impacts.

Focus Group Session with the Canadian National Institute for the Blind (CNIB)

City of Ottawa Focus Group – CNIB

Date: July 20, 2020

Round 1: What is your experience with waste management in Ottawa? What services do you use (black bin, blue bin, green bin, Household Hazardous Waste, Take it Back!, yellow bag)? What challenges do you face? What could we do better?

- Brampton has an incinerator, it's an interesting idea.
- I don't use the green bin. We don't have enough room to store it. We could change the requirements for residential buildings. We should plan/set out building requirements that require space for bins.
- I put my bins out but they may not be put back in the same location by the waste collectors. It makes it hard to find and know which bins are mine. You could put braille on them/labels. What they are and what they're for.
- Clearer visual labelling system for bins. A hygienic place to put a braille label.
- At first, I only got a print waste collection calendar which didn't work for me. But now I have it on my phone.
- Public waste bins need to be labelled clearly. There are several slots and they're all different. I don't know what is supposed to go where and have to ask someone. Braille or high contrast labelling would help.
- Consistency in order of which slot is which for public bins. Always the same order (e.g., left to right – waste, recycling, compost).



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- Multi-res properties often have a bunch of different bins by the curb. I don't know which is mine. There need to be better solutions for condos – smaller bins, dedicated space, and a lot of public education.
- Clearer visual labelling system for bins. A hygienic place to put a braille label.
- There are no compost bins in my condo. And the bins for blue/black aren't distinguished, so I don't know which is which. Could they be different shapes or textures to differentiate?
- I currently live in a house but I'm considering a move to apt/condo, but for everything I've looked at garbage can be easily disposed of on the floor, but for recycling you have to go down to a garage which is daunting. I haven't seen any buildings with compost.
- In a garage – bins should be close to the elevator or door; you shouldn't have to wander through the garage which could be unsafe.
- Not the entire city needs differentiated bins for blind/low vision residents. Can be for those who express need for accommodation.
- Concerned that labelling might identify blind, vulnerable residents' addresses and could be a safety concern.
- For collectors to recognize the needs of a blind/low vision resident we could consider tags on bins – doesn't have to say, 'this is a blind resident'.
- Ask drivers to not put bins on the sidewalk. When going for a walk they obstruct the path. Especially in the winter.
- With the pandemic, we are trying to avoid touching/tactile, we could use technology to identify different bins. Counterpoint - Concern about the move away from tactile/braille due to COVID. That's literacy.

Round 2: If we don't recycle, reuse, or reduce more, our landfill could be filled by 2041. How can we make it easier for people to recycle and compost? Why do you think people don't compost or recycle more? Are those reasons different when you're in a public



Plan directeur des déchets solides

space, like a park or city facility? Why? How can we encourage people to reduce, reuse or refuse more?

Not explored specifically.

Round 3: There are lots of ways we could improve waste services in Ottawa. This could include reducing our packaging or recycling more, encouraging people to reduce or refuse products that are single use, making it easier for people to recycle and compost in parks or public areas, focusing on customer service, trying to make the system affordable for households, or using new technologies like waste to energy or chemical processing. Are we missing anything important that we should be considering? What is most important to you about the future of waste management in Ottawa? Thinking ahead 30 years, what does waste management look like?

- We generate far too much waste. E.g., plastic, cardboard, when you host a party. There are alternatives. We need to change the way we think about waste. E.g., refillable containers, paper versus plastic. Public education to change behaviour.
- During COVID, a number of things seen as unacceptable before are now possible. E.g., working from home. Homes aren't designed for working from home, like they are not designed for recycling. As people start to change behaviours, have waste management behaviour be part of our change.
- Re-opening plans for workplaces, 'we will not have communal dishes, you need to bring yours'. A great idea. People are bringing their own stuff. Could help with waste reduction. Fewer people going to coffee shops, so paper cups not being used. COVID could show us ways to reduce waste. Farmers Markets banded together to order things online, those products come with less packaging.
- COVID – a need to adapt. Need to create a need/incentive to change behaviour. Education won't matter if people don't see the need/benefit. There needs to be a compelling WHY.



Plan directeur des déchets solides

- Needs to be more convenient. Need others to internalize the value of this, like I do, I'm an eco-nerd.
- We're moving in the right direction. In walkable communities (Hintonburg, Westboro, Glebe) there are shops that sell products without packaging, you have to bring your own. Easier to do in those environments than in big box stores. I've heard some grocery stores are moving toward not purchasing from vendors if there is too much packaging. A big move toward less plastic/packaging. In the future they will have a better mindset towards this.
- In the last couple of years, a lot more places to refill water bottles around Ottawa. Great direction to head in.
- Avoiding plastic bags in grocery stores. Go back to paper, bring your own bag.
- I wish there were more places to compost my guide dog's poop around the city. No access to those facilities unless I'm at home. It would be great to have more compost bins around the city.
- As long as the city can provide the public with information on why we want to make change, to better understand. E.g., landfill won't have enough capacity if we don't make changes. Explain, we have a plan to make changes and why. People will start to think twice and change their behaviour.

Focus Group Session with Junior Achievement Ottawa

City of Ottawa Focus Group – Junior Achievement Ottawa

Date: July 22, 2020

Round 1: What is your experience with waste management in Ottawa? What services do you use (black bin, blue bin, green bin, Household Hazardous Waste, Take it Back!, yellow bag)? What challenges do you face? What could we do better?



Plan directeur des déchets solides

Respondent 1: there needs to be more awareness especially with youth. I feel like I'm uneducated even in terms of knowing what is recycled. Partnering the city with big organizations (e.g., Starbucks); those orgs should be encouraged to donate extra food instead of throwing it out. Most of the time it's up to the manager who makes the call – usually they are told to throw out food because they can't serve to customers the next day; educated youth on what you can do; it would be interesting to know what I can do with plastics for example, turning it into clothes; a lot of people are always onto the next thing and buying more things; we should be more aware about how should that impact me; it does without them even realizing it. Education is the most important thing.

Respondent 2: I have worked in fast food industries and the amount of plastic I have thrown out is insane; maybe there's a lack of awareness and care from top-level management. A lot of different multi-level housing don't have green bins. I would like to have a regulation where they do have to offer that service. Recycling was super inconvenient; put more emphasis on putting those regulations on apartment buildings; some people can't afford to buy a house, so they buy apartments; make it more accessible to the average consumer.

Respondent 3: I live downtown in an apartment building; in my property there's 4 units and there's another building next to me and we all share one huge garbage bin. For the week it's just big enough, but our recycling bins is a 5th of the size. Even if you're trying to recycle, you only have one day to do it and then it's full.

Respondent 4: in northern Ontario they have bins with lids. I find there, you look around and there's no garbage on the floor or blowing around. I see a lot of garbage blowing around in my area of town. Maybe we can get different bins in the future? Having that would help a lot with the waste in the environment. I did go on a trip to Guatemala and our thing was going to a school and educating younger students on cleaning up their environment. There was a lot of waste on the ground there because they don't have the infrastructure in place. They were building ecobricks – where you take pop bottles and fill them with chip bags. We do recycle here, but there is still a lot of waste in the environment.

Respondent 5: I lived in residence in university and while we did have a green bin, a lot of people didn't know what to put in. Providing educational resources so residences know what to



Plan directeur des déchets solides

put in. International students who may not know about recycling practices in Ottawa. I've noticed some companies especially in building complexes don't have green bins or don't use them as much. Maybe they're not aware of this. I'm also part of OYAC and we've done consultation around the environment, and in public spaces in the downtown core, you will see garbage bins but not as many recycling or green bins.

Respondent 6: I ran a business for 2 years that eliminated the need for plastic bags – when people were given something that could reduce plastic and that was convenient, they are more willing to use that. I had to convince my family to use the green bin. Learning about how much waste we could be composting; it does come down to convenience. When you have apartment buildings where you have to do the extra step, it puts people off. This is a big issue.

Round 2: If we don't recycle, reuse, or reduce more, our landfill could be filled by 2041. How can we make it easier for people to recycle and compost? Why do you think people don't compost or recycle more? Are those reasons different when you're in a public space, like a park or city facility? Why? How can we encourage people to reduce, reuse or refuse more?

Respondent 1: when I was talking to a customer one, who had a straw that was metal, you could shrink it easily and expand it to become a full straw; the city could advocate for products like that. Personally, I wouldn't carry a lot of things with me. Carrying a reusable mug for example is better for the enviro but not necessarily convenient if you are running around. Even shedding light on those businesses that offer environmentally friendly products. Maybe a partnership with those businesses to guide them and listing these businesses who sell eco-friendly products. Price is not necessarily an issue because these products last for a long time.

Respondent 2: one thing that I personally want to see change – we are turning into a society that loves takeout. I feel like people do takeout once a week or two weeks. I want to see an initiative for eco-friendly containers; municipal legislation where they have to give you eco-friendly containers when you get takeout. Education about how easy it is to clean (reusable cutlery instead of using plastic cutlery). COVID-19 has been a set back (e.g., ordering takeout, masks on the ground); but it's made people more aware of the garbage they've thrown out.



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Respondent 1: for composting, there's a lot of magots involved and some people might be deterred, when it comes to managing and organizing that. Perhaps have products that help getting rid of bugs or making it easier in that sense. When you have flies and maggots... the city comes at different times for garbage, recycling, etc., so people might tend to just throw stuff in the garbage and get rid of it. Maybe more frequent pickups?

Round 3: There are lots of ways we could improve waste services in Ottawa. This could include reducing our packaging or recycling more, encouraging people to reduce or refuse products that are single use, making it easier for people to recycle and compost in parks or public areas, focusing on customer service, trying to make the system affordable for households, or using new technologies like waste to energy or chemical processing. Are we missing anything important that we should be considering? What is most important to you about the future of waste management in Ottawa? Thinking ahead 30 years, what does waste management look like?

Respondent 6: the incineration of garbage – I don't know if I'm correct on this – I remember learning about a company who was making something that could burn garbage with low emissions. Is this too good to be true? When it comes down to it, there are a lot of people who are very stuck in their ways. I have hope in younger generations, especially because they are teaching it in schools now. Plastics are frowned upon in schools. I'm sure incineration is expensive, but I think that if this is something that could work, it could be useful as a last resort for things we can't recycle or compost.

Respondent 4: there are a lot of companies that are trying to use sustainable takeout containers. I find that restaurants don't do that. I know the federal government is looking at banning the single use plastics. If that could be a by-law in the city. If the landfill is going to be full in the next 20 years, that's something that should be put out. If you're not using your green bin, use it (create a sense of urgency through marketing). Social media campaigns and marketing are crucial for public awareness. Having that conversation with people is important so they know they could be doing better. There's only so much space that we can use; who wants to have a landfill in Barrhaven? As the city expands and grows outwards, there are only so many places where an additional landfill could be added.



Plan directeur des déchets solides

Respondent 1: I want to say yes/no to what you're saying Respondent 4. If you say the landfill is almost full, they might say how does this affect me? Instead, maybe you could talk about garbage piling up in your house (target you directly); it's important to say this is what you can do to be a part of the solution, so you don't have to deal with the problem. The future seems far away, but it's actually closer than we think it is.

Respondent 5: when I was reading the document and how much waste could be diverted, that stat was worrying to me. Maybe having a program that incentivizes more green bin use in residential complexes. Connect with the residential buildings to get feedback and actually hear from them. When you're in high school or elementary school it is easy to have an assembly about it and educate through that way. Once you get into university, it is a lot more difficult to target post-secondary school students. I think it would be nice to look into how to target post-secondary students and how to educate them on this issue.

Respondent 3: living downtown, I was confused about when garbage day was. I ended up finding an app that prompted me the night before with notifications. This is something little, but it is really useful. If they get a notification on their phone, they might be more likely to do it.

What's most important to you as you think about how the city manages our waste going forward (roundtable)?

Respondent 6: the most important thing is trying to make it as convenient as possible. At the end of the day, people act out of convenience. Give people ways to make it easier for them to use programs like the green bin. Apartments – make it more convenient than throwing your garbage down the chute. A lot of people don't want to walk down the flights of stairs to compost. The garbage shoot is on each floor, but recycling and composting is not.

Respondent 2: as we start going into more e-commerce businesses, I would like to see more action against businesses. I think clothing is always going to be prevalent in garbage. People like to throw out textiles. Is there recycling for textiles? I think the City is doing a good job at teaching young kids about environment. If you came to schools every year, that would influence the future generations to want to care about this.



Respondent 1: e-commerce; what can we do to do this more? What's a way we can change that?

Respondent 5: interesting case study about reducing energy – every month if you are able to reduce your energy consumption, you can get a reduction in your bill fee – it would be interesting to have some program in place at an individual level, if you are able to recycle or use the green bin more, you are able to get a reward or a reduced bill. There's a waste service fee that's tied into the property tax; it would be interesting to see if there's something we can incentivize people to do on an individual level.



Appendix 9 – Dialogue Sessions with Solid Waste Services Operational Staff

Four dialogue sessions were held for members of the Solid Waste Services operations staff in July of 2020. The purpose of these dialogue sessions was to gain the perspectives of operational staff working in waste collection and processing, and landfill operations and management.

Dialogue Sessions with Solid Waste Services Operational Staff (consolidated)

Question 1: What do you think works well with the current system? What strengths can we build on?

Group 1

- We have the right systems in place (blue/black/green bin) and we have contracted capacity. Some municipalities don't have these programs – ours work very well.
- The City's collection system for blue and black bins is much better than some other municipalities. Better buy outs due to the dual stream.
- Systems in place seem to be working well right now. We could be more innovative – in 30 years from now is hard to picture what it will be like. There are lots of innovative ideas out there, eco-friendly innovative ideas. EQ labs (solar compacting trash cans) – decrease collections by 50% (residential – on the street). This optimizes collection operations.
- Programs work well – need more comms and education around them.
- Works well: curbside pickup schedule. Wish we could pick up less and less (garbage) but for now it works well.
- Excited about the fact that recycling will soon be producer responsibility. This should help with packaging.



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- We have a certain amount of control over the current system that works well. It's not ultimate control but we have control over diversion programs (aside from regulations). The new IPR system will mean we have less control. Catch 22 with this switch.

Group 2

- Collect all materials on a timely basis, in an affordable and efficient fashion. We have affordable collections contracts and delivery really good service. We serve our customers properly.
- Our status-quo satisfies most people in the city. We educate on what's recyclable/where to put things, etc. The level of service and current programs work well – we operate a smooth collections service and are regular.
- The programs we have work very well.
- We use our resources well. We have landfill capacity. We manage contracts well and process things well. We have good contracts and good relations. We have good specialty programs (HHW, etc.)
- We identify other resources to do the work we need to do (equipment at landfill or collections contracts already in place)

Group 3

- Vehicle collection system has improved. Co-collection vehicle system is an improved option vs having to sort the material at recycling facilities
- Ottawa has several diversion programs.

Group 4

- Landfill sequencing, GPS system and compaction numbers
- Landfill gas – plays an important part in what the future options will be



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- Beneficial reuse of our material e.g., soils
- Capping the landfill is now quicker

Question 2: Bearing in mind the points in the presentation on the purpose of a Waste Plan and why it is needed in Ottawa: Where do we need to improve? What doesn't work so well?

Group 1

- Convenience. Make sure putting garbage/recyclables/etc. at the curb is easy for the residents.
- More events. Educational events for residents. By both the City and contractors.
- Residents want to know what's happening and where things are going.
- Bag limits or pay as you throw
- Focus on curbside collection improvements and then the other smaller portions of waste can be addressed once we've made curbside diversion.
- Increasing communications from the city – could be doing way better. Example: app for residents to be able to download on their phones. Some people like collections calendars (paper), but maybe we should leverage social media more to educate people.
- Maybe provide recycling incentives (% off taxes, etc.).
- Bag tags – if you want to put out a lot of waste, you'll need to pay.

Group 2

- Diversion and regulations of items coming to the landfill (organics ban)
- Communication to rural residents – signs at local stores advertising what goes in what bin.



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- Cameras on trucks for timestamps of pick-up times – also a way to track what’s set out (appropriately or not).
- Pickup of large items. Right now, people set out things every other week that is a huge burden to collectors (mattresses, etc.) – can we regulate this? Events a few times a year for major collection of big items?
- Separate plastic and glass collection
- More diversion. We had a shift when we introduced the green bin, and another shift when we switched to bi-weekly collection.
- We need to make some tough decisions (clear bag/pay as you throw/strict bag limits)
- HHW program – there is a massive time gap in the year when residents don’t have a chance to dispose of HHW (winter months)
- Compost stations – decentralization of processing facilities. Community processing, using animals to compost, etc.
- Extra bags should be paid for - purchase City-branded bags to put extra garbage in
- The website needs pictures of the recycling bins we deliver with a measurement scale and check boxes beside them. As user friendly as possible. This will help residents pick bins suitable for their house.
- Introduce policies to decrease illegal dumping.

Group 3

- Make it easier for residents to use the diversion programs. All recycling materials should be marketable. Companies producing the packaging material is responsible for the end product.
- Larger containers with weekly or bi-weekly collection



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- Address the confusion of what is acceptable in the waste diversion programs by creating the same diversion programs across municipalities/cities.
- Diapers should be included in the green bin program.
- Programs are to be mandatory
- Improve the education related to the green bin program.
- More lifespan of the landfill if residents use their green bin
- To help the environment = diversion programs need to be mandatory
- IPR – very beneficial for the municipality
- Enforcing bag limits – consider tag-a-bag program
- Removal of e-waste and appliances is not convenient. More education is required to inform residents on proper disposal options

Group 4

- Extend the life of the landfill – diverting more material - beneficially reusing
- Reduce tonnages
- Quality of leachate
- New excess soil regulations – lack of space for soil, considering bufferland properties to manage the materials
- Improve landfill gas efficiently
- Improve on collections – offer automated systems on the vehicles. It provides a safe environment and could impact the landfill operations long-term



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- Improve on better landfill practices e.g., build on flatter cells approach to operate the landfill more efficiently
- More local use of east-end transfer stations – less fuel consumption for our vehicles
- Pre-planning requirements for end of life of landfill
- Adapting to trends. Composition of waste changes our decision on how we manage our waste
- Explore the reuse of items – e.g., mattresses, bicycles etc. create reusable streams
- Imposed regulations to be aligned with SW operations
- Inform residents on what happens to material brought to the landfill. An example - metals are not removed from the garbage stream and sorted onsite. Education piece is missing
- Options/programs to divert more material from the garbage stream

Question 3: Imagine it's 2052 and we've just completed our 30-year solid waste strategy... What does a successful strategy look like to you? So, given the goal of the Waste Plan is to ensure a municipality's waste is managed in the most sustainable manner possible over the long term, what does the ideal waste management system look like in Ottawa in 30 years' time?

Group 1

- Everything at the curb picked up in 1 truck and brought to 1 place. A centralized waste to energy facility, or a dirty MERF. A 1-stop-shop!
- Technologies will be out there and available to make collection and disposal/diversion convenient.
- People doing proper waste streaming, in a convenient way.
- Limited number of bags at the curbside and enforced limit.



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- Good technologies out there that will help with the garbage situation. Sweden is aiming for 0 garbage – let's look to see what they're doing to better understand possibilities. A technology that converts waste to energy or fuel.

Group 2

- Decentralization of facilities for processing or composting. Lessens GHG emissions. Belgium and France diverted organics from landfills by using backyard chickens.
- No need for a landfill.
- Single use items gone.
- Paper bags in grocery stores – no exceptions.
- Resource centers – places to swap recyclables or HHW products. Community resource centers where you can dispose of things or leave them for a trade.
- Easier access to waste diversion bins in public spaces. And same colour scheme.
- Waste to energy facility to generate enough energy for homes around the processing plant.
- Enforcement of Provincial 3Rs mandate for builders, etc. to encourage diversion
- Mushroom foam to replace Styrofoam in home building processes. Working closer with home builders to manage the waste they produce and dispose of.
- Retrofitting new homes with 3 stream waste bins for convenience – embedded in the design process of new homes and multi-res buildings so it's just there ... convenient for residents. Just need to change behaviour.

Group 3

- Everyone is doing their part to divert their waste
- Landfill has a longer lifespan



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- Extend the lifespan for an extra 10 years
- No more garbage – everything is reused. GMP and fibre is 100% recycled/reused/repurposed.
- Companies must rethink how products can be reused
- Markets are profitable for the manufacturer
- Keep it local – not exporting our recycling material

Group 4

- More diversion streams
- Strict by-laws
- Stronger education
- Incineration
- IPR is in place
- Automated collection vehicles
- Proven waste technology
- Responsible environmental system
- Innovative technologies – able to control the environmental effects
- Societal changes, particularly no single-use plastics
- More user responsibility – consider the choices being made prior to purchase
- Reuse – resale of items
- Give-away days – reuse option



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- Consider fully autonomous compactors. California has a trial project
- 360o view camera system for fleet
- Waste would be minimal
- Producers are responsible for their packaging
- More education
- Residents are more environmentally conscious

Question 4: What are the key considerations for this success? What do we need to consider to help ensure our ideal scenario is achieved?

What are the key considerations for this success?

Group 1

- Triple bottom line is very important.
- Simple – if you keep it simple, people will participate, and you will keep your costs down.
- Looking at garbage as a resource. Incinerators work well in some areas although they are controversial.
- The regulatory environment and enforcement is going to be critical for success.
- We need residents to better understand the costs. Need to clearly communicate the consequential costs of all policies and programs.

Group 2

- Enforce the green bin program and the recycling programs.
- Mandatory participation in diversion programs – education and enforcement
- Decentralization for processing/composting – community centers for organics



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- Transfer stations for drop off from collectors or residents with HHW
- Opportunities for bulky plastics to be re-homed instead of recycled
- Whatever we do, it needs to be affordable. It's also got to be achievable. We need to do things that make sense, and that we know we can do.
- Whatever we do, it needs to be accepted by most of our residents.
- Triple A: Acceptable, Achievable, Affordable.

Group 3

- Education material to be available in multiple languages
- Diversion programs are mandatory – implement fines. More enforcement.

Group 4

- Collaboration with other city groups
- Planning with Federal and Municipal regulations in mind
- Push for IPR
- Waste technology guidelines – offer a proven technology option
- Educate residents on the severity of our waste system and work towards a common goal
- Provide tours/presentations as an educational tactic
- Reach out to younger audience
- Example to change behaviour: promote positive messages via earned media (CTV news segment)
- Obtaining information needs to be easier



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- BC implemented a 'credit system' program to increase diversion.



Appendix 10 – Survey Completed by Frontline Operations Staff

This survey was intended for frontline operations staff and was completed by seven waste collection operators. The survey consisted of three open-ended questions. The following are high level responses from the surveys:

Question 1 - What do you think works well with the current system? What strengths can we build on?

- I like the green bin program as a way to reduce what goes in your garbage and a good way to dispose of food scraps to be collected weekly.
- People have access to garbage/recycling collection calendars.

Question 2 - Where do we need to improve? What doesn't work well?

- Educating the residents on recycling, garbage and organic waste as well as showing them the full process of garbage collection from start to end.
- Enforcing bylaws and stricter rules.
- Enforcing bag limits on garbage, recycling and yard waste.
- During fall and spring (yard waste season) allow for a yard waste bag limit.
- Educate people on acceptable materials (e.g. no dirt in yard bags).

Question 3 - Imagine it's 2052 and we've just completed our 30-year solid waste strategy. What does the ideal waste management scenario look like in Ottawa?

- The biggest step for all this to come together will be awareness and implementing – need effective education for this to be successful.



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- Educate people through various means on bylaws and waste reduction. Offer residents premium options for those seeking to surpass the bylaws bag limit.
- Health and safety of all workers is a priority.
- Actually help residents reduce the amount they produce.



Appendix 11 – Individual Submissions

Various emails and briefs were submitted to the City of Ottawa by residents and stakeholder groups. These have been reviewed and analyzed for the purposes of this report and copies have been shared with the technical consultant retained to assist with the Waste Plan's development.

What's do you like about the current system

Email: I believe that what we are doing is good, but people need more education on what is actually waste and what is recyclable. Same goes for what goes in the green bin. I believe having someone going door to door who is educated on the subject i.e., a worker would help a lot. To explain to the residents how the system works.

Via phone: It's uniform, easy to use. Not too many trucks. Good service in terms of fact you can dispose of virtually anything at the curb.

What do you not like about the current system

Staff member: I think introducing proper packaging explanations to residents on how to pack their garbage recycling and organics would be a great idea. We should limit their waste pick up by introducing bag limits.

Staff member: The city could also use auto carts which would limit the amount of injuries obtained from heavy lifting.

Staff member: Health and safety for collection staff, particularly stronger rules around needle collection.

Via phone: Poured money on education and it hasn't done much to the diversion rate.

What want to see in 2052

By email: In 30 years from now I hope that the city fines more noncompliant residents also I think we will be converting waste into consumable energy by incinerators.



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As far as health and safety goes. Any bag that is not tied or any loose waste gets left behind and notice of violations be given.

Via phone:

Incineration

Transparency in where materials end up after collection

Emissions decreased

Revenue generation by converting material to energy

Landfilling as little as possible

No Styrofoam and large plastic packaging

Bulky item separate collection and transparency in where those material end up. Need to be recycled as much as possible.

Make it easy for people to recycle more items, such as textiles.

Have depots for collecting a wide range of recyclables.

Considerations

Via phone: Need to back everything up with more education

Organics need to be focused on

Compost quality needs to be improved to make it more appealing to separate organics.



Appendix 12 – Validation Workshops with Key Stakeholder Groups

A series of workshops were held in late September 2020 with the Stakeholder Sounding Board and City Champions Group, to present the preferred draft vision statement and a shorter list of guiding principles and goals. The purpose of the workshops was to get final input and validation from key stakeholders into these draft statements.

The following are the minutes from the workshops:

Stakeholder Sounding Board (SSB) Meeting on Vision, Guiding Principles, Goals

SSB Meeting - Notes

September 30, 2020

Vision

Take progressive, innovative and collective action towards a Zero-waste Ottawa.

- The majority of participants like the vision. It's refreshing and bold.
- Strong sentiment from most that the vision should be “Zero-waste Ottawa”, at least to lead off with.
- There was discussion around removing the “Take progressive, innovative and collection action” portion, as these are the ways that we would get to a zero-waste state. Or could re-word, putting this at the back end of the vision.
- For example, “The City of Ottawa will be a zero-waste city and as a community, we will be progressive and innovative/ championing innovation and being progressive, working collectively.
- Re-written to have a visionary character.



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- Need to write the statement as if you've put yourself into the future 30 years and say what's happening around you.
- The way it's written is more of an action statement, with a verb at the front. Should state what our community will look like in 30 years.
- One participant likes the vision statement, feels it may be a little intimidating, given where we are currently at. Suggested "cutting waste in half" as an alternative to zero-waste.
- We need to be bold and progressive; won't achieve anything if we're not, but also recognize that we need to be realistic. Referenced the City's actions need to speak louder than our words.
- Suggestion to not narrow vision down to just waste itself, rather take a much broader approach and reference circular city instead of zero-waste.
 - Progressive cities are moving to circularity/to be fully circular
 - Using circular waste term allows cities to consider a triple bottom line benefit, which includes environment and waste, but is much boarder – broader than just environmental focus
 - Take cities to be progressive and innovate to become circular
 - Waste means different things to different people, without a definition of what it is.
 - It's not just about waste if we want to be progressive and a fully circular city
- Another participant raised the issue that the City of Ottawa doesn't have full influence or control over all of the different aspects that contribute to a circular economy and that this could be a barrier to a vision focused on the circular economy. Agreed with the idea of a circular economy vision but felt it would be more realistic to have is stay at zero-waste as we have more control and influence overachieving this.
- The vision needs to focus on the end state, be bold, aspirational and inspire, and have no deadline.



Guiding Principles

Honouring the 5Rs waste management hierarchy by choosing options that support waste reduction, reuse, recycling and recovery so that minimal residual waste is sent to landfill.

- It was not clear what the 5R's actually were.
 - "What's the 5th R", as they were just looking at "reduction, reuse, recycling and recovery"
 - "Is the first R refuse"? (side note – I said they were reduce, reuse, recycle, recover and residuals management)
 - Need to clarify in the statement, only see 4 R's.
- Suggestion was to clarify what they actually are.
- Suggestion to make the first R refuse.
- Was some discussion about making it explicitly clear in the wording that there is an order of preference to the waste hierarchy and that ones higher up are preferred to the ones lower down on the hierarchy, include "in that order" or words to that effect, need to say somewhere that we're prioritizing them.
- Not sure what "honoring" actually means. Likes the word "prioritizing".
- One participant noted that recovery is a disposal management tactic, not sure how the principle of recovery/landfill/EFW as a residual waste management tactic. How does it connect with achieving zero-waste or being fully circular? By extension, minimal residual waste is sent to landfill, but the vision says zero-waste. Not sure why principles speak to disposal management at all. Could just get rid of the residual management text.
- Suggested removing from the principle – could be a separate principle if needed. Doesn't preclude the fact that we will need to manage residual over the planning period – it just shouldn't be a guiding principle.



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- A vision is aspirational, whereas a guiding principle is how we will achieve this.
- Comment on residual management piece – won't here always be some sort of residual. Will still have to manage public health impacts of.
- Response was managing residual is a reality, don't know why it has to be part of a guiding principle. Doesn't preclude the need to manage residual responsibly. Would be something that we as a city just do.

Shifting community behaviour so that residents and stakeholders share the responsibility of waste management and play a role in achieving the goals of the Solid Waste Master Plan.

- No feedback provided.

Protecting the environment for future generations to come by mitigating the environmental impacts of managing waste.

- No feedback provided.

Leading by example when managing waste as a corporation by incorporating the 5Rs waste management hierarchy across the City's entire operations.

- No feedback provided.

Adopting circular economy principles to minimize the use of raw materials, recognize waste as a resource and maximize the value of waste and keep products and materials in use, and support the transition to individual producer responsibility, where producers that sell and profit from consumer goods are responsible for the environmentally sound end of life management of these items.

- Question was posted if circular economy was part of the vision, what would happen to this principle. May be redundant but wouldn't hurt to keep it as a principle.
- Comment that there's a lot wrapped up in this one principle. Would keep it if not too wordy.



Solid Waste Master Plan

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- Some discussion that the circular economy could replace zero-waste in the vision (see vision section above for comments provided on this)
- They liked the first part of the sentence – up to and including “in use”
- Suggestion made to not include the IPR reference (so effectively, remove the last part of the principle). It doesn’t fit as a guiding principle, it’s a management consideration.
- Suggestion to replace “waste” with materials where it is highlighted in green, as we there is no value in waste.
- Suggestion to “move it up” to be one of the leading principles
- Could combine the vision with this principle but drop the IPR reference. Suggestion “the City of Ottawa will be a Circular Economy that minimizes the use of raw materials, maximized the value of waste and keep products and materials in use.”

Embracing innovation and being open to opportunities to adopt to emerging technologies, policies and industry trends.

- No feedback provided.

Keeping waste local by treating residential waste within the City’s boundaries, wherever operationally and economically feasible.

- No feedback provided.

Goals

1. Extend the life of the Trail Road Landfill significantly beyond its existing anticipated end of life to eliminate the need for a new residential landfill.

- Support for an overarching goal of an environmentally friendly, cost effective waste management system. The other goals noted would be to actions to achieve this overall goal. The Goal #1 above would a result/outcome.
- Could tie it to the vision statement – it’s an action



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2. Reduce the amount of waste generated by residents and the City as a corporation.

- No specific feedback provided.

3. Maximize the reuse of waste generated by residents and the City as a corporation.

- No specific feedback provided.

4. Maximize the recycling of waste generated by residents and the City as a corporation.

- No specific feedback provided.

5. Enhance the recovery of materials and energy from the waste stream.

- No specific feedback provided.

6. Mitigate negative environmental, social and financial impacts of residual waste that cannot be reduced, reused or diverted from landfill.

- For goals 2 to 6, 6 is really the goal. Goals 2 to 5 are really an action directed towards this goal.
- Goals 2 to 5 could be wrapped up into one goal to create a circular economy, with goal #6 mitigating the impacts of residual waste.
- For goal #6 - comment that isn't mitigating the environmental, social, and financial impacts of residual waste regulated? Admitting that we expect we will need to manage residual waste? Find it strange that it's a goal; think that managing the impacts of anything that is landfilled or burned is regulated. The goal isn't about zero-waste or a circular economy, it is accepting that residual waste is a given. Implicit that we're already doing this, municipalities do a good job, required by the Province to do so, suggest removing.
- Mitigating environmental impacts is legislated. Same for social to a certain extent, through public consultations. Wants to see the social aspect included in the master plan, but maybe not in the goals



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- For goals 2, 3 and 4 – maximise the reuse of waste, maximise to reduce, replace “waste” with “materials” (same as noted for the guiding principles).
 - Don’t know what maximise the reuse of waste by residents means. Is it another description for recycling or are you maximizing the reuse to prevent waste? It’s not waste if you’re reusing it. Suggested “maximizing the reuse of materials to avoid or eliminate waste generated by residents”.
- Discussion on goal #5, around the use “enhance”, and what is meant by “recovery of materials” and “energy from the waste stream”.
 - Don’t know why using the word “enhancing recovery – didn’t know what is meant by this, what’s the thinking here? Redirecting money to do this?
 - Does the recovery of materials mean more recycling?
 - One participant saw the “recovery of materials” as getting the materials out of landfill
 - Another thought it meant recovery of energy as a result of the recovery of materials
 - If we’re not recovering all the energy now, then we need to do that.
 - Thought energy recovery meant capturing the “off-gassing” from the landfill.
 - Thought that the idea of the sentence was that recovery of energy would be the result of recovery of materials.
 - Some agreeance on don’t think that we should be talking about the recovery of material and energy in the same goal. Found the sentence confusing. As long as you are extracting more energy out of the waste than it takes to do this. This would be a positive thing. Questioned whether it meant recovery of food waste or creating fertilizer.
 - Recovery of materials was seen by one participant as a future thing that happens at the landfill (landfill mining). Not clear what it means.

**7. Work towards achieving 100% GHG emission reductions produced by the City's integrated waste management system.**

- Should be “achieving”, not “working towards”, so it’s measurable
- Suggestion for goal to be re-worded to something around “carbon neutral or net zero GHG emissions by 20XX (end of the plan)”.
- Question about what the baseline year would be, but discounted as it would be 100% reduction, so not needed.
- By the end of the plan was OK for some, but others questioned why so far out (to 2050)? Comment that didn’t know how modelling was done and what was achievable.
- Question around the alignment of the goal with the City’s Climate Change Master Plan and the fact that it needs to align with this
- This goal would correspond to leading by example
- The goals need to align with other City plans, if they do, it’s good

8. Influence through regulatory tools, support and partner with the Industrial, Commercial and Institutional sector, including multi-residential, small businesses, construction & demolition and agricultural sectors, to reduce, reuse and divert waste in the broader community.

- Suggestion that the goals needs to be a bit more supportive of those sectors that are referenced
- Suggested to rearrange the wording to lead off with “support and partner”, then move the regulatory reference to come after. Seen as too harsh leading off with the regulatory stick aspect.
- One participant was wondering if this goal related to the circular economy aspect; the City working with partners towards a circular economy (cited single use plastics, by-laws) or if it was more related to recycling and waste reduction



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9. Enhance the accessibility, convenience and consistency of waste management programs and services to ensure maximum participation.

- Change “waste management programs” to “waste reduction programs” – don’t want to encourage the production of waste by enhancing accessibility and convenience. Don’t want to make it convenient to “waste”.
- Maximise participation should lead the sentence. Want to maximize reduction, reuse and diversion. Want to reduce residential waste.

10. Maximize cost containment, revenue generation and the efficient use of waste management resources to help minimize costs to taxpayers.

- No specific feedback provided.

11. Make sustainable waste management design an essential part of the city’s planning process.

- No specific feedback provided.

Other Comments on Goals

- Don’t see any reference to aligning with the City’s procurement policies and practices with the vision. Need to align these with circular economy and zero-waste. Needs to be a specific goal. Aligning with by-laws
- Need to ensure the system is affordable. There’s lots of good environmental goals, need a cost one as well.
 - A participant suggested that goal #10 covers this off. Reply was that it seems to be more about specifics, that the goal didn’t include minimizing the total costs
 - Need to cost to consumers

City Champions’ Group Meeting on Vision, Guiding Principles, and Goals

CCG Meeting - Notes



October 1, 2020

No questions were posed during the presentation. Below are the notes from the end of the slide deck when we had our open discussion:

- Accolades from Respondent 1 specifically regarding internal engagement with City Staff
 - Not seeing any gaps
 - Goals are meaningful and can see actions associated with them
- Respondent 2 echoed what Respondent 1 said:
 - Goals are good
 - Impressive that we went from so much consultations with so many ideas to condense everything down to what we need to do
 - Asked about targets: goals lead to targets... is that in the works?
 - Staff: We're developing targets and concrete objectives later on in Phase 2 so we aren't bringing forward targets without the community and council what it will actually take to achieve those targets. Over the next few months, we are working with our consultant on the extensive list of options – we will then consult with the public and council to shortlist the options for the strategy, and then we will be discussing “how far, how fast” do we want to move? That will shape the targets. If they chose to be aggressive, targets will be different than if we chose to be a little less ambitious.
- Respondent 3 to “work towards achieving (#7) sounds a little wishy-washy. Firm this up if we chose to be aggressive. Also, the “Affordability” factor is very low on the feedback we received but we need to reconsider this. The price tag attached to targets are usually not met with the required resources to achieve them. We need to be upfront about the cost around the goals.



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- Respondent 4 –We should be very realistic with the goals we set. They need to be SMART, and most importantly, possible. Need to make sure investments are worth the outcome.
- Respondent 2 thinks that if we have surveyed the public, let’s take them at their word. They said financial implications are a low priority, then let’s go with that. It’s a fine line but we have the evidence to back us up on what was told to us in the public consultation.
 - Staff: next series of engagement will include more diverse public sessions. This round engaged people who are typically more engaged in this industry, but we need to be sure we are getting more representatives next time around. Having the clear cost implications laid out will help with that engagement.
- Respondent 5 gave kudos to the team. Had two questions (this is his first meeting) – 1. a principle around the role and city advocacy... there’s so much minutia. Local municipalities are really challenged with tackling things that have impact on consumer choice and preferences. Is there a role of advocacy as part of this plan?



Appendix 13 – Evaluation framework

General Framework				Option Name		
Weight Overall Score, 100 Max	Categories & Criteria	Indicators	Notes	Assessment and Colour Coded Rating (see below)		
33%	Environmental Sustainability			Assessment	Rating 1-5	
		Resource Efficiency	Potential to avoid/reduce/reuse waste	Potential to avoid/reduce/reuse waste will depend on type of option and materials considered.	• Assessment	#
			Potential to increase diversion of materials from landfill	Potential to recover additional materials will depend on type of option and materials considered.	• Assessment	
			Potential to recover additional reusable, recyclable, organic, or other marketable materials	Potential to divert materials will depend on type of option and materials considered.	• Assessment	
		Climate Impact	Potential to reduce GHG emissions (e.g. from facility operations / material transportation or material recovery/energy offset)	Does not include emissions from manufacturing or production. May include potential to consolidate facilities/vehicles, reduce vehicle usage. May consider ability to divert methane generating materials from landfill.	• Assessment	#
			Potential to reduce energy consumption (transportation fuel, electricity, etc.)	The ability to recover/generate energy may offset any fuel/energy used. May include changes in distances travelled	• Assessment	



General Framework				Option Name	
Weight Overall Score, 100 Max	Categories & Criteria	Indicators	Notes	Assessment and Colour Coded Rating (see below)	
			(e.g. fuel use), number of vehicles required, change in power consumption.		
	Local Environmental Impact	Impact on land and water quality	Impact to air is considered under "criteria air contaminant emissions" so as to avoid double counting. May include potential for litter or discharge to land or water or improvements.	• Assessment	#
	Overall Category Score	Rounded average of criteria ratings.		Narrative and Rank	
	Weighted Score	Multiply overall category score by 6 (each point in the 5 tier point system is worth 6.66 weighted points to equal a total of 33.3 points out of 100).		Weighted Score	
33%	Health and Social Implications			Assessment	Rating 1-5
	Safety and Health Impact	Potential for impacts to public and staff safety	May include impacts to the public and to staff (e.g. collection staff), including number and type of safety issues, including improvements to community safety.	• Assessment	#



General Framework				Option Name	
Weight Overall Score, 100 Max	Categories & Criteria	Indicators	Notes	Assessment and Colour Coded Rating (see below)	
		Potential for impacts to public health from criteria air contaminant emissions	Primarily from emissions to air, including vehicle emissions.	• Assessment	
		Potential for impacts to public health from noise, vibration, odour and ground water contamination	Assesses the potential impact to human health and opposed to the environment	• Assessment	
		Risk of increased litter and vector / vermin	May include risk to the public and to collection staff.	• Assessment	
	Equity and Inclusion	Potential issues with stakeholder acceptance	May include nuisance factors, equity, affordability, complexity, level of behaviour change required.	• Assessment	#
		Potential level of effort for stakeholders to use the option. Consider any physical or design impediments that may inhibit use or understanding of a program.	May include convenience, accessibility, level of effort to use.	• Assessment	
		Risk of community interruption from increased traffic, odour and noise	May include potential for increase or decrease in traffic, odour, noise.	• Assessment	
	Economic Development	Potential to create new local jobs (development and operations)	May include short term or long-term jobs, use of volunteers, reduction in jobs.	• Assessment	#
		Potential to support economic growth and innovation	May include ability to apply innovation to derive a beneficial use from the recovered materials, potential for local or	• Assessment	



General Framework				Option Name	
Weight Overall Score, 100 Max	Categories & Criteria	Indicators	Notes	Assessment and Colour Coded Rating (see below)	
			regional economic growth, market creation, requirement for further processing and marketing and social enterprise opportunities.		
	Overall Category Score	Rounded average of criteria ratings.		Narrative and Rank	
	Weighted Score	Multiply overall category score by 6 (each point in the 5 tier point system is worth 6.66 weighted points to equal a total of 33.3 points out of 100).		Weighted Score	
33%	Financial Viability			Assessment	Rating 1-5
	Direct Cost	Initial and future replacement capital costs for City	In general, assessed relative to other options in the same category.	• Assessment	#
		Annual operating and maintenance costs for City (including contract costs, administrative costs and city staffing needs)	Potential to increase or decrease operating costs.	• Assessment	
	Revenue and Savings Potential	Potential cost savings to other components of the integrated waste management system	May include collection, processing or disposal costs.	• Assessment	#
Potential to generate revenue from sale of recovered materials		May include number and type of materials which could be sold.	• Assessment		



General Framework				Option Name	
Weight Overall Score, 100 Max	Categories & Criteria	Indicators	Notes	Assessment and Colour Coded Rating (see below)	
		(plastics, metals, compost, etc.) or from generated energy			
	Risk and Reliability	Cost and schedule implications associated with implementation, approvals and permit complexity	May include number of suppliers/parties, complexity of approvals process, schedule implications with multiple parties and type of technology, reliance on third parties, use of City staff to reduce risk., ease of implementation.	• Assessment	#
		Risk of issues with reliability or availability of facilities/vendors/technology	May include number of steps involved (e.g. collection, processing, disposal), number of facilities/vendors available, familiarity of process/option to Ottawa/other municipalities, scale of option.	• Assessment	
		Impact to system complexity and flexibility	May include ability to site or relocate, specificity to certain feedstocks, modularity/ability to expand, number/type of end products and ability to market.	• Assessment	
		Risk of contractual issues and liability	May include number of suppliers/parties, reliance on implementation or operation by third parties, contractual risk.	• Assessment	
	Overall Category Score	Rounded average of criteria ratings.			Narrative and Rank



General Framework				Option Name
Weight Overall Score, 100 Max	Categories & Criteria	Indicators	Notes	Assessment and Colour Coded Rating (see below)
	Weighted Score	Multiply overall category score by 8 (each point in the 5 tier point system is worth 6.66 weighted points to equal a total of 33.3 points out of 100).		Weighted Score



Appendix 14 – Evaluation Tool Development Workshops with Key Stakeholder Groups

From August to September 2020, virtual workshops were held with the City Champions Group and the Stakeholder Sounding Board (SSB) to inform each group about the development of the triple bottom line evaluation tool and to hear their thoughts about its proposed design. A workshop was also held with Council Sponsors Group to obtain their feedback.

City Champions Group (CCG) Evaluation Tool Review – Workshop Meeting Notes, June 26, 2020

1. Opening remarks

- Lyndell started workshop and reviewed the agenda
- Shelley welcomed participants and introduced the project team

2. Solid Waste Master Plan Project overview

- Nichole provided an overview of the Solid Waste Master Plan

3. Purpose of the evaluation framework and how it will be applied

- The consultant walked everyone through the evaluation framework design, the evaluation process, the triple bottom line framework, and reviewed the evaluation framework criteria and indicators
- Questions and discussion:
 - Is industrial, commercial, institutional (ICI) waste in scope?
 - Will the evaluation tool be used for the next decades?
 - Might be good to call social considerations "health and social considerations"
 - Engagement of Host Nations should be part of local environmental impact



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4. Breakout groups to discuss the draft framework

- Lyndell explained the breakout sessions where participants would discuss the environmental, social and financial categories and indicators
- Facilitators summarized the breakout session discussions and feedback

Environmental sustainability session:

- Impacts to leachate from additional precipitation
- Impacts on workers from extreme heat
- Impacts on acceptability from higher temperatures (odours/ maggots)
- Data on future climate conditions is available in the Climate Projections for the National Capital Region, available at www.ottawa.ca/climatechange
- In terms of weighting, from a climate perspective, options that help meet our emission reduction targets will be key.
- Climate Impact, potential to reduce GHG's – does this need to specify Ottawa's GHG targets?
- Local Environmental Impact – Should consider impacts to land and water under future climate conditions, example additional leachate due to increased precipitation.
- Based on the criteria I explained, environmental factors have the potential to be almost two orders of magnitude greater than social or economic ones. Add to this the fact that the City has declared a climate emergency and you have my case for making environmental weighting significantly greater than the other two.
- Under “potential to reduce GHG emissions” - acknowledge how resilience was considered in the category



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- Add indicator specific to conflict with regulatory requirements - ensuring compliance with regulatory requirements
- Add indicator – about resource use – specifically water quantity - consumption of water as a resource - consumption of land and water (perhaps consumption of land should be a separate indicator)
- For consideration – adding an indicator if appropriate (may be more appropriate for siting process/tie-in with OP) - anything with a physical presence needs to take into consideration future local surrounding land-use and the potential environmental impact to local communities (and ties into social implications with siting new facilities)

Additional Categories for Consideration

- Add new category - Regulatory Requirements
- Add Indicator - Meets regulatory requirements/flexibility in meeting future regulatory requirements
- Need to meet regulatory requirements,
- Need flexibility to meet future regulatory or social changes
- Climate impact - what about council direction - climate emergency - does that trump all categories?

Other

- Suggested wording tweak for Climate Impact- Potential to reduce energy consumption of combusted energy (transportation fuel, heating fuel, etc.)
- Also suggested tweaks for the notes section - The ability to recover generate energy may offset any fossil fuels/energy used. May include changes in distances travelled (e.g. fuel use), fuel efficiency, number of vehicles required, change in power consumption. Or electrification of a task or process currently using fossil fuels



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- Suggested addition to Climate Impact – Potential to reduce GHG emissions notes add “Also reduction of fugitive methane emissions.”.

Social implications session:

Health and safety – comments from breakout room

- We need to include staff – an indicator called “Potential for impact on staff health and safety” – we can measure by anticipating risk criteria – would need to see some examples – WSIB claims? What changes could impact that and monitor going forward
- Indicators are pretty general
- Right now it is very broad – Public Safety – could be “yes/no” – some notes will be essential to clarify what public safety means
- Recommend equity and inclusion lens to all health and safety impact – for each option, would there be a higher public health risk for women or vulnerable communities? Depending where the landfill is, is there more impact on air emissions on black residents if the landfill is proposed in a predominantly black neighbourhood. The City already has this tool (EI Lens). Should apply at all steps
- Need to be explicit on residential hazardous waste – simply how HHW is handled – right now, there are dropped off points, but they are not accessible (seniors need to be able to drop off syringes or medication – where can they do that? With what frequency)
- So far, it looks good – having trouble with the word “potential” at the beginning of the indicators, but is broad – not “clear cut” what measuring those indicators would look like. It is not clear what the indicators will be for public health. You want your indicators to be helpful, and ensure there is no room for interpretation – perhaps they need to be defined further off to the side, or reword it in a way that can’t be misconstrued/ -- public health could be interpreted in many different ways



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- “Potential for injury or illness” – might help direct their think – injury and illness = safety.
- We are capturing air contaminant emissions which is pretty specific, but “public health” is very broad
- We need to get an understanding of the consequence that we are trying to avoid when looking at these indicators
- “I don’t think health and safety is considered a social factor – I think it needs to be “health and social implications” as the category
- More than just air emissions -- mental health considerations need to be considered
- Some indicators should be in more than one group i.e. drinking water – if it meets environmental issues, but maybe needs to be social as well “several issues don’t fit nicely into just one group; in order for our tool not to be too cumbersome
- Several equity and inclusion should be under health and safety (traffic, noise, odour is also health and safety; litter and vector/vermin) – by putting it under equity and inclusion – you are only putting these landfills somewhere where there are equity and inclusion issues
- I would like to see the number of complaints and community representation for equity and inclusion: “ability of someone to participate on a community liaison to provide input”
- “Ability to participate” – how is ongoing community engagement – The consultant answered
- When you have residential development close to a landfill site or collection depot, the planning dept requires windows not to be open

Safety and Health Impact

- Consider impacts under future conditions especially heat



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- Potential impacts for public safety: The plan may also result in challenges to public safety i.e. we receive feedback that waste receptacles on sidewalks create safety challenges for people with disabilities

Equity and Inclusion

- Consider potential odours/maggots from higher summer temperatures and longer seasons
- Right now it is straightforward
- “EI lens” – actual tool that the city uses – should be included throughout
- Under “notes “may include convenience, accessibility, etc.” – does this include cost, people? Affordability should be added in, and ability to provide support – agreement from Heather on this. “potential doesn’t feel measurable”
- There was not a clear understanding of the word “stakeholders” – some participants didn’t realize that that included residents. Consider reword or elaboration for clarity
- Equity and Inclusion - I don't see how equitability is being considered through those criteria. It should be about ability for ALL people to participate – low income, visible minority, immigrant, aboriginal, gender-based, etc...
- Stakeholder acceptance: Also consider a person’s ability to follow plan, in addition to complexity (I’m thinking about other municipalities that provide assisted waste collection to people with disabilities and seniors)- this could fall under level of effort too

Economic development

- Would recommend the column called “indicators” be called something else – those are not “indicators” – they could be “description”.
- Should add a “brand development” indicator – that the City has a brand that helps with talent attraction – so the reputation with the City being environmentally sound



Plan directeur des déchets solides

and using technology “a community I want to work in therefore one I want to work in” – this dimension needs to be captured

- Impacts of which robotics, autonomous vehicles, drones, etc. – all have implications on the labour requirement
- Labour force implications is one dimension. Exportable technology and innovation (products and services) is another. While a new technology may reduce labour force requirements locally but then create new jobs in supplying the technology/product/service to another market.
- In triple bottom line evaluation, economic dimension is usually one of the triple. Here it is subsumed under social dimension. Unusual.

Additional Notes from Room

- When it comes to land implications, there should be a call to engage the host nation in all discussions
- It's unusual that economic is included under social
- Development can get lost under financial, but the community effects of this fall under social. Makes more sense to include under social implications than it did under financial
- Would add technology and innovation that weaves into social and financial. There could be a criterion in social that speaks to the opportunities afforded by a program component, and then move overall economic growth and innovation under financial
- Don't see level of service to our clients – does it improve our level of service?

Financial implications session:

- Revenue and Savings Potential – (May include collection, processing or disposal costs.) Private or public ownership



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- Risk and Reliability – (May include number of steps involved (e.g., collection, processing, disposal), number of facilities/vendors available, familiarity of process/option to Ottawa/other municipalities, scale of option) Demonstrated performance at a commercial scale with residential waste in North America
- Risk and Reliability – (May include number of suppliers/parties, reliance on implementation or operation by third parties, contractual risk.) Put or Pay contracts, Term length drives per tonne costs
- Risk and Reliability – diverted benefits - if we divert waste away from the landfill we can sell the air space to recover costs
- Labour and maintenance (or operational costs) need to be considered. While direct cost of a particular asset might be low on the front end – how costs are incurred over the years needs to be weighted heavily.
- And what is the availability of the firms who can provide the maintenance? I.e., Stormwater sewers, only one company who can provide service. Is there a cost included in the delays there might be in getting maintenance?
- Category of Ownership – is this included in governance? Who is responsible to maintain infrastructure? Or is it better in risk and reliability?
- Put or pay will drive down cost/tonne
- We should be using demonstrated technology that has proven and reliable solutions.
- *prompted group – should the city not try out new things? How can we be innovative in our approach*
- There is needs to be time limits, parameters and exit strategies in order to begin a pilot.



Solid Waste Master Plan

Plan directeur des déchets solides

- We should create a threshold or a template for how we decide what pilots or trials we take on.
- There is risk of always going with the cheapest option. Direct and operating costs cannot be viewed in isolation, but rather as an aggregate cost. A holistic view.
- Net present value over a lifetime
- Capture also indirect impacts, i.e., high capital cost might generate operational savings somewhere else or ancillary cost savings, like extending the life of Trail rd.
- Also – need some category or ability to capture external funding. I.e., grants or other levels of government
- Under Direct Cost, annual O&M costs Notes section - Private or public facility - perhaps one of the categories should be ownership - i.e., does the City own the facility and have a private sector operator, own and operate, or contract out the entire service.
- Under Revenue and Cost Savings Potential, potential cost savings Notes – private or public ownership
- Under Risk and Reliability:
 - Risk of issues with reliability notes section - Demonstrated performance at a commercial scale with residential waste in North America
 - Risk of contractual notes section - Put or Pay contracts, Term length drives per tonne costs
- Diverted benefits - if we divert waste away from the landfill we can sell the air space to recover costs
- Private or public ownership will have the largest impact of direct or O&M costs - i.e., does the City own the facility and have a private sector operator, own and operate, or contract out the entire service??



Solid Waste Master Plan

Plan directeur des déchets solides

- Technology – must be demonstrated performance at a commercial scale with residential waste in North America.
- Put or Pay contracts, term length drives per tonne costs
- Direct Cost - lifecycle renewal costs should be considered

Questions and discussion:

- In triple bottom line evaluation, economic dimension is usually one of the triple. Here it is subsumed under social dimension. This is unusual. Suggest explaining why it is done this way for the readers.
- Also suggest looking at technology and innovation and where it fits. Especially considering this is for a 30-year time horizon. As for the ICI sector, things could also change over the next 30 years.
- The intent is to refresh the plan every 5 years to look at new opportunities such as changes in the ICI sector
- When it comes to land implications, there's a call to include the Host Nations in the discussion, could we consider adding that as an indicator, possibly as part of local environmental impacts.

Action

- Lyndell invited everyone to send any additional feedback on any of the indicators to her in the next week

5. Weighting of the triple bottom line evaluation categories

- Lyndell reviewed the triple bottom line weighting
- Questions and discussion:
 - Need to consider overall goal of the Waste Plan is to reduce waste going to the landfill site, so would give environmental sustainability weight. Waste management



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in Ottawa costs much less than in other municipalities, so there is room to increase cost for improving environmental sustainability.

- There is also an opportunity to build the clean tech sector by being open to innovative products and processes developed locally that could be taken abroad to build this sector.
 - Health and safety concerns are guaranteed, so if the environmental category was weighed more, there would be positive public health benefits. Social considerations could be weighted less because of the existing health and safety laws.
 - Communications of what the City is doing is often a missed opportunity. We have a chance to build our brand and talk about what the City is doing. The City has an opportunity to be a leader instead of a follower. Acknowledge there will be some risk.
 - The City's role is to use tested technology on outcomes we can guarantee, so would rate the financial viability higher. Our responsibility with taxpayer dollars.
 - Investing in innovative technologies does not always bode well. Don't want to be left with an unproven technology that doesn't work and can't deliver service.
 - Think the categories are equally important. Does it mathematically make a difference to the outcome? Likely not, unless we are making dramatic changes to the weighting. Would need sensitivity analysis.
 - Agrees it would need to be quite different to make a difference.
 - Think they are all important.
 - Should this discussion follow the consultation and ideas coming from the public and stakeholder groups?
- Triple bottom line poll with participants to seek input on the weighting of the three categories



Solid Waste Master Plan

Plan directeur des déchets solides

- Poll results (11 respondents)
 - Votes for environmental sustainability:
 - 30: 9%
 - 33.3: 36%**
 - 35: 27%
 - 40: 27%
 - Votes for social implications:
 - 30: 55%**
 - 33.3: 36%
 - 35: 9%
 - 40:
 - Votes for financial implications:
 - 30: 36%**
 - 33.3: 36%**
 - 35: 18%
 - 40: 9%
- Suggestion that it seems premature to assign weighting now, as we're still discussing what fits into which category. We also need to consider the impact of the weighting. Instead, recommend using this as a way to present options to Committee later.
- According to our initial poll results, it looks like it balances out. If the categories are considered to be equally important, there's no need to apply weighting.



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Feedback provided independently from workshop/poll:

- While I understand that these plans have heavy environmental and financial impacts, I would caution against weighting the social impacts as any less than 33.33%. In my opinion, it should be given equal weight to the others. When we do not consider the social impacts of these plans, we create barriers, leave people out, and reduce compliance.

Triple Bottom Line Weighting Comments from Social Implications Breakout Group:

- We need to look at the ultimate goal of the master plan, which is to reduce and divert waste to other uses and reduce GHG emissions. That falls within environmental sustainability, so I am of the opinion that it should have more weight. Depending on how much we weight environment, we have to be ready to pay
- With financial viability, it is important, but when you look at what it costs the taxpayers in Ottawa vs taxpayers in other municipalities – waste management in Ottawa is extremely cheap – from that perspective, there is room to increase fees charged so we can afford options.
- There is an opportunity to building the clean tech sector by being open to experimenting with processes developed by local entrepreneurs that if successful, could be taken abroad – positioning Ottawa as a leading tech provider in the waste sector
- With all of the requirements for public safety that are built into the MOE and laws of Ontario, health & safety concerns are pretty well guaranteed with any option, so if the environment was weighed more, it would contribute to health and safety from GHG emission reductions.
- We need to ensure solutions are reliable and economical.
- All three are important; to what degree is questionable. I think they are equally. We need to understand how the difference of weighting will imply on the outcome. There needs to be a sensitivity analysis to plug some numbers in

6. Closing remarks



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- Lyndell concluded the meeting, thanked all participants for their contributions today, and described the next steps:
 - We will be considering all of the feedback provided during this workshop
 - Hosting another workshop with another group of key stakeholders - our stakeholder sounding board - to get their thoughts on the evaluation tool
 - We will then update the draft evaluation tool, including the criteria and indicators, as well as the weighting and present our proposed evaluation framework to our Council Sponsors Group
 - Once the tool has been finalized, we will send it to everyone

Solid Waste Master Plan Stakeholder Sounding Board (SSB) Evaluation Tool Review – Workshop Meeting Notes, September 9, 2020

A second workshop was held with the Stakeholder Sounding Board to discuss the evaluation tool (a framework) that will be used to assess various options that will be considered for Ottawa's future waste management system. A well-designed evaluation tool helps ensure that all available options are looked at from an environmental, social, and financial point of view (triple-bottom line approach).

More specifically, the purpose of the meeting was to:

- Provide the Stakeholder Sounding Board (SSB) with an overview of the evaluation process that will be used to evaluate the different options.
- Seek their feedback on the triple bottom line approach, specifically the categories and criteria that have been developed (attachment was sent out with the meeting invite).
- Hear their thoughts on the proposed equal weighting of the triple bottom line categories.

The following are the minutes from that meeting:



Introduction

- Lyndell welcomed participants, introduced the project team and reviewed the workshop agenda.
- Nichole provided an overview of the Solid Waste Master Plan and a status update.
- Lyndell reviewed the workshop objectives and provided an overview of the options evaluation process.

Options development and triple bottom line evaluation framework

The consultant reviewed the options development and evaluation process, including the screening steps and the triple bottom line categories, criteria and indicators for evaluating the options. Her presentation was followed by a Q&A.

Questions and discussion

- Is the evaluation tool used at the multi-criteria analysis point?
 - The triple bottom line evaluation tool is the multi-criteria analysis.
- Is risk factor of materials evaluated as well? Example recycling computers, batteries, medications with chemicals/toxic compounds presenting risk?
 - Diversion of household hazardous waste, which includes these materials, will be looked at during the evaluation process.
- When is the question of who pays for programs evaluated?
 - It's included in the evaluation process, under both the financial viability and social implications categories.
- Overall reaction is you've done an excellent job identifying and defining things. Under financial viability, the focus is often on costs to the City, whereas some options have significant costs to users. Where is this included?



Solid Waste Master Plan

Plan directeur des déchets solides

- Agree this is a factor. It is included in the framework under stakeholder acceptance that takes into consideration equity and affordability. For example, if users need to pay for bags to participate in programs.
- Can we talk about the weighting of the evaluation categories? Noted a discrepancy in the slides. Also, these are broad categories. Think you need to delve into details. What are your thoughts on working out a more detailed weighting within the categories?
 - The difference is due to the example shown. This is only an example of an outcome. What is being proposed is equal weighting for the three different categories. Rating is proposed to be done by category because in their experience, there's a difference of opinion within the criteria categories.
- Are we locked into the proposed equal weighting for environment, social and financial considerations? Or is there flexibility on this?
 - This is proposed for discussion today.
- Is there any thought to weighting the individual indicators? For example, assigning the potential to reduce waste a higher rating than the potential waste diversion indicator.
 - The City is seeking feedback on this approach. Consultants have found that weighting the indicators makes the tool less clear and transparent. Also, the City is following the 5R waste hierarchy that gives greater priority to reduction.
- Financial viability only measures cost to City, does not measure cost to users. Need to evaluate users' costs (condo boards, landlords, need to move items around; need to remove contamination from bin).
 - This appears under 'social' under 'stakeholder acceptance' – this takes into account equity, affordability, and the cost of actually undertaking this action.

Breakout groups to discuss the draft triple bottom line tool



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Lyndell explained the purpose of the breakout sessions: to discuss the environmental, social and financial categories and indicators.

Environmental Sustainability Session

Resource efficiency

Indicator: Potential to avoid/reduce/reuse waste

- Wonder if we could include unintended consequences in the resource efficiency explanation notes and how a recycling program that makes it easier to recycle could lead to greater consumption.
- What is there in the draft indicators is fine. No mention of the circular economy, so suggest adding this to the notes given it's a major policy approach for governments to move towards a circular economy.
- See the unintended consequences with plastics recycling. No doubt there are benefits, but the outcome is that there are plastics everywhere. There's a definite repercussion to easy recycling, especially with plastics.

Indicator: Potential to increase diversion of materials from landfill

- Confirmed this is looking at the waste hierarchy. Agree this is good as worded.

Climate impact

Indicator: Potential to reduce GHG emissions (e.g. from facility operations / material transportation or material recovery/energy offset)

- This indicator is really important.
- What is going on with the City's work to document GHG emissions? And what is the implication for the options? Hasn't seen anything on GHG emissions. Would appreciate an update on this.



Solid Waste Master Plan

Plan directeur des déchets solides

- *As part of the SWMP, the City will be doing a baseline GHG assessment of the current waste management system. GHG emissions will be considered in the evaluation of the options.*
- Clarified what options are included in diversion. For example, composting at the Orgaworld facility (Convertus).
- Why weren't the organics taken outside for composting, instead of taking them to a facility like Orgaworld/Convertus. With energy generated by composting process?
 - *The Province regulates the processing of source separated organic material. Food waste cannot be composted outside, due to vector and vermin issues. Material containing food waste must be composted in an indoor facility. Separately collected leaf and yard waste is composted at the City's outdoor composting facility.*
- Note that leaf and yard waste composting is cheap and simple. But adding food waste makes the process more complicated.
- Note the importance of data and the need for the waste plan to conform with energy evolution targets.
- Could be problematic that this does not include emissions from manufacturing or production. Need to consider the whole supply chain and all emissions when looking at policy options. For example, incineration releases GHG emissions at the facility, but to look at the net emissions, we need to look at the whole process.

Indicator: Potential to reduce energy consumption (transportation fuel, electricity, etc.)

- Sensible, obvious thing to do. Seems to make sense and is broad enough.
- Agree. We could consider multiple depots where people could bring recyclables to smaller facilities considering large geographic area. Could see opportunities here.

Local environmental impact

Indicator: Impact on land and water quality



Solid Waste Master Plan

Plan directeur des déchets solides

- Appreciating that air quality is a health issue, wouldn't want this to get lost. Prefer that this be included under environment category.
- Agree that it's confusing that we have land and water under environment, but air is under social. Think it's a better fit under environment.
- See that people in Ottawa are dumping aerosol containers because there aren't enough recycling options. Not a great option to travel all the way to the landfill. Poorly advertised how people can recycle oil. Not a proper solution. See a big whole with the City's plan and would like to see it filled.
- There's a need for smaller, more decentralized, local depots. See private sector being paramount to this. Combination of provincial and private industry efforts.

Roundtable: Anything missed?

- Difficult to capture everything. Need to start somewhere.
- Last category is local environmental impact. Consider dropping local for this indicator. Incinerator stacks have impacts beyond local environment. Or if we truck wastes long distances, the impacts are broader.
- Is there an intent to feed all of this information up to the provincial level? It would be good to do this.

Social Implications Session

- Risk of increased litter and vector/vermin should be moved to Safety and Health.
- Under 'Economic': impact to housing and housing affordability should be included, i.e., how would new programs impact costs of new builds, retrofit costs and increases to rent and condo fees?
- Equity and Inclusion – something that measures the difference between overall cost and affordability.



Solid Waste Master Plan

Plan directeur des déchets solides

- It should be measured somewhere that a program might have a different impact to different kinds of Ottawa residents, i.e., OCH might need services more often than others. Also, ensure that this distinction can be done without stigmatizing.
- Odour/noise/traffic – this is also a safety concern. Questions whether it is in the right category or not.
- Should also be measures how well a program can generate enthusiasm; this goes beyond simple user acceptance.
- Participant recognizes that it is captured but emphasizes the need for a measure based on eliminating issues for those with mobility constraints.
- How can a program accommodate different users or be tailored to unique needs?
- OCH example: taking out the trash is often a responsibility of the children of the household, so they had to make adjustments to the disposal areas to reflect that need.
- Group discusses the need to break apart the ‘User Acceptance’ into more granular line items, i.e., User Cost and Affordability and nuisance factor can all be separately measured.
- ‘Social Enterprise’ should be included under ‘Economic’. This gives community members an opportunity to build job skills, that could lead to long-term employment.

Financial Implications Session:

General

- Financial viability needs to consider the cost of each option on the end user (residents and businesses). There was an understanding that it is captured under ‘stakeholder acceptance’ but group agreed that the cost needs to be captured separately. Several examples in text below.



Solid Waste Master Plan

Plan directeur des déchets solides

- There was a question to see if there is a way to measure how each option impacts the life of the landfill (i.e., how does an option to increase diversion lead to cost savings / avoidance by delaying having to find a way to manage residual waste?).
- Financial viability should also consider the future state. We have climate change projections that may implicate the costs of certain options in the future.

Question for parking lot:

- You can have a program that can minimize this and have less cost, and a potential for revenue increase, but the risk is very high. How is that reflected in a number?

Direct cost

- Only looking at it from City costs – cost to property owners, business owners, etc. Some businesses pay for services, but they aren't receiving them.
- When looking at indicators, how does this relate to the landfill? Looking at the 'cost of landfill' need to look at the savings for preserving landfill space by managing it better and maybe add it as a potential indicator under revenue and savings potential – there is a tie in on ROI but opportunity cost.
- Participant finds that the 'direct cost' section also extends to 'revenue and savings potential'.
- In agreement that the 'environmental cost' of decreasing landfill space should be taken into account, but also looking at direct costs as it relates to climate change.
- The City of Ottawa and NCC acquired good climate change projections, and now that we have that info – in terms of risk – can we build in an indicator for costs associated with climate risks? Will there be a financial implication when looking at future climate? I.e., stormwater management and landfills – will there be an increased cost if there is more significant rainfall (maybe under direct cost as operating – and the environmental risks)



Plan directeur des déchets solides

- Question: on the business vs consumer aspect of things. If legislation mandates a single use plastic ban, the ability of what they can consume is not always in their control (i.e., buying a salad – maybe it is only offered in plastic box). This creates an extra burden on residents.
- How will this evaluation criteria measure the costs for businesses to adhere with such a policy change (i.e., a business may have to spend more to comply with a single-use plastic ban to offer more expensive alternatives that adhere to legislation).
- In agreement that there is a business cost and consumer cost, and taxes – not an equal playing field. Some businesses and residents are paying taxes for services that they are not eligible to receive.
- City should consider a ‘phased in approach’ to reduce the financial burden some options may have on residents and businesses.

Revenue and Savings Potential

- Participant asked the consultant for clarification on ‘potential cost savings’ – does this mean that some options might present savings for other parts of the system?
 - *Some things add to City cost but reduce resident costs (e.g., a new municipal waste program).*
- Measuring the impact of the cost of the landfill (might be able to fall under potential cost savings), ‘avoided cost scenario’.
- Another angle reception and value of expenditures – lack of adoption of composting there is criticism of processes, and cost vs benefit from a consumer perspective. There are efficiencies that aren’t being captured.

Risk and Reliability

- Risk and reliability are measured in a negative scale whereas the other two are positive. What is the potential for positive impact? What is the potential for negative impact?



Solid Waste Master Plan

Plan directeur des déchets solides

- Participant likes the idea of a weighted for each indicator, i.e., is direct cost more important than risk and reliability? With the negative piece – try to move the scale for those options to go from positive to negative score (in traduce negative scores) – make it possible to lose points. You can have a program that can minimize this and have less cost, and a potential for revenue increase, but the risk is very high. How is that reflected in a number?
- Important to consider the impact of COVID on all of this – impact the cost of different waste management practices.

Roundtable/Group comments

- Important that all stakeholders have an understanding of what the 5Rs waste hierarchy is.
- With landfill – if there was an incentive for businesses to divert or change their practices so they created less waste – i.e., if you divert x number of tonnes of waste, then you’d have a reduced tax base for commercial taxes.
 - *The consultant jumped in and mentioned that an option of this would be screened in in the beginning.*
- How will City consider the potential cost to waste management as a result of other City policies and strategic directions (i.e., urban boundary expansion; housing intensification)? Will it be factored into the evaluation process? What about costs associated with development charges? (Costs with development charges was addressed by Nichole, who brought up changes at the Provincial level and ability to “charge back.”)

Breakout session feedback and discussion

Facilitators summarized the breakout session discussions and feedback:

Environmental sustainability session highlights

- Rachael: It was suggested that circular economy be added to the indicator notes; air should be included in the environment category, along with land and water impacts; and



Solid Waste Master Plan

Plan directeur des déchets solides

the environmental impacts indicator should not be restricted to local impacts, considering that impacts are not only local.

Social implications session highlights

- Andrea: It was suggested that housing should be listed as an indicator; the inclusion of indicators under health and safety or equity and inclusion should be reviewed; stakeholder acceptance should be looked at a more granular level; and given diversity across the city, we should look at ability to tailor a program to the needs of different communities.

Financial implications session highlights

- Lindsay: It was suggested that scores be assigned for individual indicators; both positive and negative impacts are considered; the cost of the option as compared with landfilling costs (and potential savings) should be quantified; and metrics should look at financial viability today and in the future, as well as how costs can be impacted by other City strategies.

Questions and discussion

- Stakeholder acceptance and potential level of effort for stakeholders: participant worries about too much emphasis being placed on this factor. Knows it was a reason for allowing plastic bags in the green bin. Thinks it's important for the City to make tough decisions (and do research on human dynamics). Emphasis needs to be on doing the right thing, rather than acceptance.
- Participant hopes that we're focused on long term employment, rather than short term jobs from building a facility. Would like the City to put money into institutionalizing reuse and repair options, rather than relying on volunteers.
- Participant suggests adding an organics indicator under 'Resource and efficiency'. Potential to divert organics from the landfill. Energy Evolution calling for significant diversion of organics, so this needs to be considered separately. Different than recycling.



Solid Waste Master Plan

Plan directeur des déchets solides

This is such a big piece with so many implications for building design, etc. because it has to be done at source, rather than pickup.

- How we can encourage more businesses to participate in yellow bag program depends on the City. Current limitations are resulting in business owners having to take the waste home. More flexibility would allow the program to be more effective. Should be done by business rather than by property because this is limiting participation. A development might have several businesses, but it is recognized as 'one property' so they are not eligible for program.
- Some indicators measure beneficial impact while others measure negative risk. Struggle to have indicators that measure both ways. Difficult to find measures that are objective. Suggest a positive/negative scale. Not sure what the solution is for this.
- Suggestion to also consider the impacts of climate change on the options, in addition to the GHG emission impacts. There might be some options that are impacted more by climate change, for example, stormwater management, flooding. Look at each option from a climate adaptation and resiliency lens.

Weighting of the triple bottom line evaluation categories

A separate meeting will be set up to discuss the triple bottom line weighting.

Next steps

Lyndell concluded the meeting, thanked all participants for their contributions today, and reviewed the next steps.

- We will consider all of the feedback provided during this workshop. Once the tool is finalized, it will be presented to City Council, along with the long list of options.
- Noted that we are assessing the GHG data and we will also be modelling the GHG implications of the options.



Solid Waste Master Plan Stakeholder Sounding Board (SSB) Evaluation Tool Weighting – Workshop Meeting Notes, September 21, 2020

The Stakeholder Sounding Board (SSB) came together on September 9, 2020, to discuss the triple bottom line evaluation framework – a tool that will be used to assess the social, financial, and environmental impacts of future waste management in Ottawa.

Because the conversations were extensive, the group did not get a chance to review the analytical weighting of the three components. Since there was a lot of interest in having that discussion, the SWMP Project Team invited the SSB to a follow-up workshop on September 21, 2020. The purpose of the meeting was to gather their thoughts on the proposed equal weighting approach.

The following are the minutes from that meeting:

Introduction

Nichole welcomed participants, reviewed the workshop agenda and purpose, and introduced the options evaluation tool and approach to weighting.

Triple bottom line evaluation framework weighting

The consultant reviewed the environmental, social and economic elements of the triple bottom line framework and presented a demonstration of the tool to illustrate sample scores and approaches to weighting for various recycling, collection, recovery and residual waste management options.

Questions and discussion:

- How was this model selected, which emphasises financial viability rather than economic impacts, making it different from other triple bottom line models? The financial viability category looks at the direct costs and savings.
 - *The category was renamed to reflect the City's systems and priorities. The model still aligns with the sustainability modelling and triple bottom line principles.*



Solid Waste Master Plan

Plan directeur des déchets solides

- Air quality impacts should be considered with the other environmental impacts because they all look at impacts on natural resources.
 - *We haven't yet reviewed the specific criteria indicators. We will make adjustments based on feedback that has been received. This will be done during the upcoming weeks.*
- Would like to confirm understanding of the scoring of the indicators within the categories.
 - *Each indicator is scored out of five. The indicators are totaled and then averaged to calculate the category score. The score for the criterion is the rounded average of the relevant indicators.*
- What scoring will be shared with the Sounding Board and the public?
 - *The consultants have been asked to provide a technical memorandum to report on the options evaluation results. This will be shared.*
- Agreement with previous comment that there's a difference between financial viability and environmental implications. Concerned about this approach.
- Looking at other waste plans such as those for Edmonton, Vancouver and Waterloo, their approaches did not include this kind of weighted analysis. Instead, they looked more broadly at the impacts.
 - *There are exercises that underlined those master plans. Some included a more complex evaluation process that wasn't necessarily discussed as part of the public framework. This approach is consistent with other municipal plans that the consultants have worked on.*
- The exercise is premature without knowing the options. Not comfortable assigning the weighting at this point. Not sure we should be bound by the City's priorities. We should be looking more broadly than that.



Plan directeur des déchets solides

- *The benefit of looking at the weighting now is to look at the priorities and considerations without being overly influenced by the options. There is value to having this exercise now.*
- Does the methodology used to score any of the 3 evaluation priorities account for the full cost accounting of the options? Environmental and social impacts have their own financial costs, and those should be integrated into the financial cost outcomes.
 - *The challenge of evaluating some options is that we don't have the level of detail needed for quantitative analysis. It exists for some indicators, but not all.*
- Respectfully disagree. There are some qualitative impacts that we can derive. It's not the initial capital cost, it's the long-term disposal cost associated with doing or not doing an activity. Acknowledge it isn't easy but suggest it should be done where it can be done. Can you please show the Sounding Board where you have this level of information for the analysis?
 - *We do have some indicators that look at potential cost systems. We will follow up to discuss how we could do this.*
- Lifecycle analysis of the environmental impact of a waste management option: looking at the beginning of the value chain to the end, from an environmental perspective, but also a social and economic perspective. Holistic approach. Lifecycle analysis looks at emissions, resource extraction, etc. to get a sense of the environmental impact. What if an option is terrible for the environment, but scores well for social and economic considerations?
 - *There are some limitations with lifecycle analysis models (e.g., limited focus on GHG's and air contaminants), so the plan is to run it through a model and then do a more holistic analysis of the systems.*
- How to compare and contrast options within the categories, as well as reduce and reuse? We need to look at putting money into these options and evaluate. Then it becomes a broader, more holistic exercise that prioritizes reducing and reusing over other options.



Plan directeur des déchets solides

- *Agree that reduction and reuse are key priorities for the City, but they get screened into the system automatically in the process. They don't go through the comparative analysis process. They are brought in as a package for the system as a whole.*
- Assume the scores will be used to assess options, not just for yes/no decisions. Think that these are pretty reasonable scoring criteria, understand that it will be difficult to assign the scores.
 - *The tool will help us narrow options that we will take to stakeholders for further input and a short-list we will then take to the public. Waste plans are living strategies, and the outcomes are revisited on a regular basis over time. This tool helps identify which options might make sense, but it doesn't indicate when, so it's only one facet of the decision-making process.*
- If there is a high operating cost to taxpayers, would that fall under social implications?
 - *Yes. It affects stakeholder impacts and acceptance.*
- The City had committed to look inwardly at its own procurement practices. Is there still a commitment to do this, and what are the evaluation tools?
 - *Yes, the City is looking at its own practices as a generator of ICI waste. The intent is that it goes beyond procurement practices, and they are included.*

Roundtable

A roundtable discussion was facilitated for final comments and reactions to the meeting:

- Based on what we've heard so far, participant and the member organization he represents are comfortable with the proposed approach to weighting. Understands there are judgements that will need to be made but overall he is comfortable with this approach.



Solid Waste Master Plan

Plan directeur des déchets solides

- Participant is comfortable with the triple bottom line. Residents in social housing will need some additional support. Would like to know if there's anything being done to take those factors into account.
 - *In the equity and inclusion criteria, we are trying to look at the ability of residents to be able to participate in the option, especially where there is a direct connection to a behavior. Will also look at equity and ease of use considerations as part of the implementation approach. We also plan to look at market research and the approach to education and outreach for different resident segments.*
- Participant has nothing further to add. Suggests it could be useful to reach out to Sounding Board members between workshops for advisory support. Offers that up to the City.
- Participant has no fundamental objections to the triple bottom line approach. Still would rather decide on the weighting later on, until we have better understanding of the options and implications. No intention to derail this but does have some concerns about the approach.
- Participant understands that this is quantitative analysis and that there will be an opportunity to reprioritize later if something isn't working to achieve targets or address other considerations. Supports the approach and plans to bring it back to the member organization to confirm that others agree. Would like to make sure there's an opportunity to review later on and feed in comments on the initial scoring. The tool considers quantitative and qualitative analysis.
 - *The City plans to bring the long-list of options to the Sounding Board and then discuss the short-listing. Yes, there will be an opportunity to discuss further.*
- Participant noted that all options will go to Environment Committee for decision, so there will be an opportunity for further discussion. This is only one piece in a number of pieces within the overall process.



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- Participant thinks the approach to weighting is reasonable. But since we haven't confirmed the sub-components of the categories, the weighting question does seem premature right now. Will be important to have a discussion later on, noting the long-term significance of the choices.
- Participant is glad we had the discussion. Thinks the criteria and categories will be subjective. Ultimately, Council will be making the decisions. Transparency through the evaluation process will be important, so that it is clear how the options were assessed.

Next steps

Nichole thanked everyone for participating and sharing input, noting that we have a lot to take away. She committed to looking at the feedback from the last session and today's session and to following up on how the feedback will be incorporated into the tool.