

City of Hamilton WASTE MANAGEMENT SUB-COMMITTEE AGENDA

Meeting #: 23-002

Date: June 23, 2023

Time: 1:30 p.m.

Location: Room 264, 2nd Floor, City Hall (hybrid) (RM)

71 Main Street West

Aleah Whalen, Legislative Assistant (905) 546-2424 ext. 6436

			Pages
1.	APP	ROVAL OF AGENDA	
	(Adde	ed Items, if applicable, will be noted with *)	
2.	DEC	LARATIONS OF INTEREST	
3.	APP	ROVAL OF MINUTES OF PREVIOUS MEETING	
	3.1	May 11, 2023	3
4.	COM	IMUNICATIONS	
5.	DELE	EGATION REQUESTS	
6.	DELE	EGATIONS	
7.	STAF	FF PRESENTATIONS	
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Members of the public can contact the Clerk's Office to acquire the documents considered at this meeting, in an alternate format.



WASTE MANAGEMENT SUB-COMMITTEE MINUTES 23-001

Thursday, May 11, 2023 9:30 a.m. Room 264, 2nd Floor City Hall, Hamilton

Present: Councillor M. Francis (Chair)

Councillor A. Wilson (Vice Chair)

Councillor M. Tadeson

Kevin Hunt

THE FOLLOWING ITEMS WERE REFERRED TO THE PUBLIC WORKS COMMITTEE FOR CONSIDERATION:

- 1. APPOINTMENT OF CHAIR AND VICE CHAIR 2022 (Item 1)
 - (a) (Tadeson/Hunt)

That Councillor M. Francis be appointed Chair of the Waste Management Sub-Committee for the balance of the 2022- 2026 term.

CARRIED

(b) (Tadeson/Hunt)

That Councillor A. Wilson be appointed Vice-Chair of the Waste Management Sub-Committee for the balance of the 2022- 2026 term.

CARRIED

FOR INFORMATION:

(a) APPROVAL OF THE AGENDA (Item 2)

The Committee Clerk advised of the following changes to the agenda.

9. CONSENT ITEMS (Item 9)

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9.1 Solid Waste Management Master Plan Update (no copy) *Moved under Staff Presentations as Item 8.2*

(Hunt/Tadeson)

That the Agenda for the May 11, 2023 meeting of the Waste Management Sub-Committee be approved, as amended.

CARRIED

(b) DECLARATIONS OF INTEREST (Item 3)

There were no declarations of interest.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

(i) June 27, 2022 (Item 4.1)

(Hunt/Tadeson)

That the Minutes of the June 27, 2022 meeting of the Waste Management Sub-Committee be approved, as presented.

CARRIED

(d) STAFF PRESENTATIONS (Item 8)

(i) Overview of Waste Management Division and Services (Item 8.1)

Angela Storey, Director of Waste Management addressed the Committee, respecting an Overview of Waste Management Division and Services, with the aid of a PowerPoint presentation.

(Tadeson/A. Wilson)

That the presentation from Angela Storey, Director of Waste Management, be received.

CARRIED

(ii) Hamilton Solid Waste Management Master Plan (Item 8.2)

Ryan Kent, Manager of Waste Policy and Planning addressed the Committee, respecting the Hamilton Solid Waste Management Master Plan, with the aid of a PowerPoint presentation.

(Hunt/Tadeson)

That the presentation from Ryan Kent, Manager of Waste Policy and Planning which includes the 2020 SWMMP Action Items (2021-2025 Progress), be received.

CARRIED

(iii) Blue Box Transition (Item 8.3)

Ryan Kent, Manager of Waste Policy and Planning addressed the Committee, respecting the Blue Box Transition, with the aid of a PowerPoint presentation.

(Tadeson/Hunt)

That the presentation from Ryan Kent, Manager of Waste Policy and Planning, be received.

CARRIED

(iv) Organics Management Strategy (Item 8.4)

Ryan Kent, Manager of Waste Policy and Planning addressed the Committee, respecting the Organics Management Strategy, with the aid of a PowerPoint presentation.

(Tadeson/Hunt)

That the presentation from Ryan Kent, Manager of Waste Policy and Planning, be received.

CARRIED

iv) Hamilton's Strategy to Reduce Single-Use Plastics and Federal Ban on Single-Use Plastics (Item 8.5)

Ryan Kent, Manager of Waste Policy and Planning addressed the Committee, respecting Hamilton's Strategy to Reduce Single-Use Plastics and Federal Ban on Single-Use Plastics, with the aid of a PowerPoint presentation.

(Hunt/Tadeson)

That the presentation from Ryan Kent, Manager of Waste Policy and Planning, be received.

CARRIED

(e) DISCUSSION ITEMS (Item 10)

(i) Terms of Reference (Item 10.1)

(Tadeson/A. Wilson)

That the Terms of Reference for the Waste Management Sub-Committee, be received.

CARRIED

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(f) ADJOURNMENT (Item 14)

(Tadeson/A. Wilson)

That there being no further business, the Waste Management Sub-Committee, be adjourned at 10:26 a.m.

CARRIED

Respectfully submitted,

M. Francis, Chair Waste Management Sub-Committee

Aleah Whalen Legislative Assistant Office of the City Clerk



- The waste collection safety campaign began in 2021
- Purpose is to bring awareness to common safety concerns experienced by Waste Collection Operators
- Staff have created and promoted four safety campaigns
- Communication Tactics:
 - Online (Social Media/Website)
 - Radio
 - TV (CHCH/The Weather Network)
 - Free City Outlets
- In the last year, the Waste Collection Safety Campaigns on Facebook have resulted in:
 - A reach of over 37,000; and
 - Over 34,000 engagements















Keep Safe, Wrap All Mattress Waste

- April 1 All mattresses and box springs required to be wrapped and sealed for curbside collection
- Mattresses and box springs are acceptable bulk collection items
- Requirement due to staff safety exposure to bed bugs and biohazardous waste

Mattress Waste Data (City Wide)	April 2023
Total Bulk Request – Mattress Waste	782
Total Bulk Request – Escalations Related to Mattress Waste	28
Total % Escalation Related to Mattress Waste	3.6%

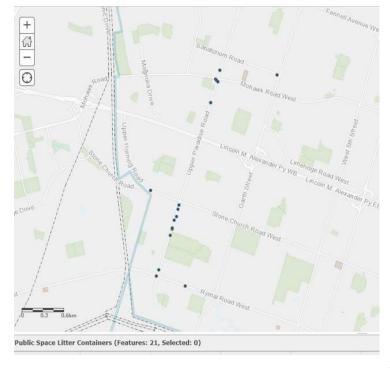




Waste Collection Technology

Waste Collection Technology

- GIS
 - Route Management (storage and editing)
 - Public Space Litter Container Asset Management
- Route Optimization
- Lytx DriveCam Event Recorder
- Automatic Vehicle Locator
- Quick Capture App Pilot





Tim Horton's Field Waste Diversion

Tim Horton's Field Waste Diversion

Green Bin Program

- Goal Implementation of green bins in both concessions and public areas
- Timeline:
 - 2022 green bins provided to concessions
 - 2023 full green bin diversion program before Grey Cup





Tim Horton's Field Waste Diversion

Green Bin Program

- Current Program Specifics
 - Green bins in concessions, main kitchen and cafeteria
 - Organics collected weekly by City collections staff
 - Green bins are stored in a designated area to prevent odours and wildlife
 - Green bins are cleaned and rotated on a weekly basis







Hazardous and Special Waste

Hazardous and Special Waste

- Similar to the Blue Box Transition, the City is working with the Producer Responsibility Organizations (PROs) for hazardous and special products (HSP) covered under Ontario's Regulations for HSP disposal from our household hazardous waste depots located in Community Recycling Centres (CRCs):
 - Automotive Materials Stewardship automotive products, i.e. anti-freeze, oil filters
 - Thermostat Recovery Program electronic and mercury containing thermostats
 - Product Care Association paints, non-refillable propane cylinders, pesticides, solvents
 - Call2Recycle consumer batteries



Hazardous and Special Waste

- The City's HHW Depots collect 58 HSP products; only 14 covered under the HSP Regulation as designated items.
- Council approved in July 2022 the continuation of accepting all 58 products to ensure that HSP is properly disposed and avoid negative environmental impacts.
- Municipalities are compensated for designated HSP items collected by PROs. Staff is working with waste industry associations and the PRO to finalize a fair compensation model as the current funding model falls short of municipal costs.
- Data being reconciled and impacts will be reported to Council if changes to the program are recommended.
- Tender for the operation and material haulage from the HHW depots in process.





What are waste composition studies?

- Waste composition studies (also called waste audits) are when waste is examined to determine the make-up of the material generated in different waste streams
- Result in valuable data used to determine the performance of different waste streams and/or waste sources

Common Waste Composition Terms					
Diversion Rate The percentage of material audited that is kept from being landfilled					
Capture Rate	The percentage of divertible material in a divertible stream that is actually diverted from landfill				
Contamination Rate The percentage of a divertible waste stream that is incorrect management					



Hamilton's Waste Composition Study Schedule

Туре	Schedule	Most Recent	Next Planned
Single-Family	Bi-Annual	Fall 2022	2025
Multi-Residential	Bi-Annual	Spring 2022	2024
Material Recycling Facility Floor	Quarterly	May 2023	August 2023
Material Recycling Facility Truck	Bi-weekly	June 6, 2023	June 21, 2023
Central Composting Facility Floor	Fund Dependent	Summer 2022	TBD







 Most recent waste composition study carried out was on 250 single family homes in the fall of 2022

2022 Single-Family Waste Composition Study Results				
Diversion Rate 45%				
Capture Rate of Blue Box Material	73%			
Capture Rate of Green Bin Material	44%			
Contamination Rate of Blue Box Material	9%			
Contamination Rate of Green Bin Material	6%			





- Multi-residential buildings (apartments and condominiums) have historically had low diversion rates
- Staff have been requested by Council to improve waste diversion from this sector
- Current support program for multi-residential buildings is reactive with education material provided only when building staff request information









Staff began a project in 2021 to better understand:

- Resident behaviour; and
- Opportunities for improvement

The multi-residential waste diversion project is a four phase project that is now in its last phase with staff prepared to move forward with a new support program for multi-residential buildings.





Baseline waste composition study results from 27 buildings:

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	Waste Category	KGs	Percentage of Garbage Stream
1	Food Waste	1868.29	24.32%
2	Other Waste*	908.37	11.83%
3	Pet Waste	593.33	7.72%
4	Diapers	589.34	7.67%
5	Paper Towels	283.66	3.69%
6	Cardboard	175.59	2.29%
7	Boxboard	161.61	2.10%
8	Flexible Film Plastic	151.60	1.97%
9	Textiles	129.76	1.69%
10	Plastic Laminates	115.16	1.50%
	Total Garbage Audited	7680.81	

^{* - &}quot;Other Waste" included construction material, cookware, PPE, rubber car mats, vinyl tarps, etc.



What was the Education Pilot?

- Tested in 14 pilot buildings, information was provided that focused on tenants understanding the benefits of participating in the green bin program
- Information included a display, updated waste guides provided to each unit by mail or staff delivery, sorting posters, cart labels and green carts
- Displays were installed in the 14 pilot buildings for one-week









WASTE MANAGEMENT DIVISION

Organic Capture Rates in Pilot Buildings:

Test Building	2021 Baseline	2022 Post-Pilot	Performance Change	Green Carts Provided
Building 1	2%	39%	+37%	0
Building 2	12%	34%	+22%	1
Building 3	0%	21%	+21%	1
Building 4	0%	18%	+18%	2
Building 5	36%	52 %	+16%	0
Building 6	29%	39%	+10%	0
Building 7	16%	26%	+10%	0
Building 8	9%	15%	+6%	0
Building 9	0%	0%	0%	0
Building 10	11%	11%	0%	0
Building 11	25%	13%	-12%	0
Building 12	16%	1%	-15%	0
Building 13	16%	0%	-16%	0
Building 14	52 %	0%	-52%	0



Organic Capture Rates in Pilot Buildings:

Test Building	2021 Baseline	2022 Post- Pilot	Performance Change	Superintendent / Property Management Status	Communication with City during pilot
Building 10	0%	0%	0%	2 Supers on rotating schedule	Yes
Building 11	25%	13%	-12%	Super manages multiple sites	No
Building 12	16%	1%	-15%	On-site property management	Yes
Building 13	16%	0%	-16%	Super manages multiple sites	Yes
Building 14	52 %	0%	-52%	Unknown	No



Non-Pilot Building Comparison of Organics Capture Rate:

Building	2021 Baseline	2022	Performance Change	Green Carts Provided
Building 15	18%	38%	+20%	2
Building 16	10%	27%	+17%	0
Building 17	18%	24%	+6%	0
Building 18	32%	38%	+6%	0
Building 19	0%	0%	0%	1
Building 20	0%	0%	0%	0
Building 21	0%	0%	0%	1
Building 22	0%	0%	0%	2
Building 23	0%	0%	0%	1
Building 24	3%	0%	-3%	0
Building 25	67%	62 %	-5%	0
Building 26	23%	15%	-7%	0
Building 27	54%	36%	-18%	0



Resident Survey

82 residents responded with following results:

- 59% responded the City's updated tenant guide was helpful
- 51% responded the lobby display was helpful
- 51% of respondents said their preferred method to receive information was mail
- 4% of respondents indicated they had visited the City's "Apartment Waste" webpage
- 0% of respondents said they had downloaded the "Recycle Coach" app





Pilot Findings and Recommendations

- Pilot program resulted in an overall increase in the capture rate of organics in participating buildings
- 2. Residents found the education material helpful
- Residents in multi-residential buildings either need to be made more aware of the waste app or need a different support tool
- More engagement with property managers / superintendents is required



Moving Forward

- Staff will proceed with making the pilot program the standard support program for all multi-residential buildings starting in Q4 2023 / Q1 2024
- Resourcing for new program will be from current staff and redistributing work – i.e. gold box program ending
- Goal to have each multi-residential building receive education once every 18 to 24 months
- Staff developing an outreach program for building superintendents and will implement when the new program starts in Q4 2023 / Q1 2024





Waste Management Performance Metrics

Waste Management Performance Metrics

Background

The establishment of new waste performance metrics was an action item under the 2020 Solid Waste Management Master Plan Update: "With pending legislation to transition the responsibility of the Blue Box Program to producers... Hamilton will need to establish new measurements to track the status and performance of the waste management program. The City will also need to establish new targets"

Waste performance metrics being reviewed today:

- Post Blue Box Transition Diversion Rate
- 2. Capture Rate of Organics from Single-Family Homes
- 3. Capture Rate of Organics from Multi-Residential Buildings



Background

 Staff considered 29 waste management performance metrics used by other municipalities, identified by staff or suggested by residents through surveys; and then short-listed 17 for further evaluation

Diversion Rate		
Evaluation Criteria	Score out of 5	
Consistency with resident feedback	5	
Alignment with legislation	5	
Ease of measurement	4	
Alignment with Council priorities i.e. SWMMP guiding principles	5	
Tangible value	5	
Total score (out of 25):	24	

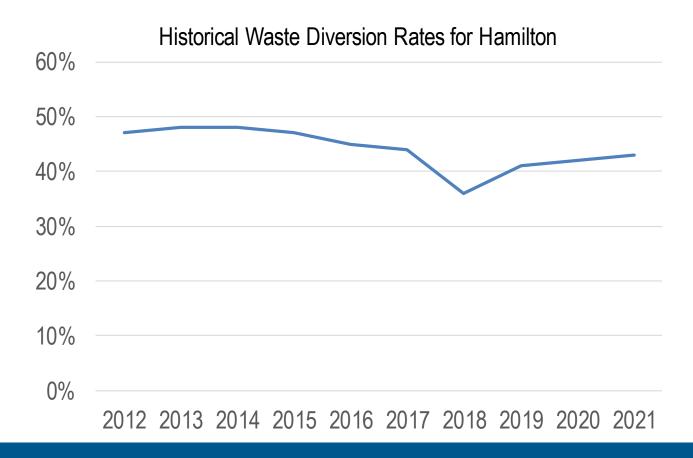


Performance Metric 1: Post Blue Box Transition Diversion Rate

- Diversion rate is the most commonly understood indicator of waste program performance
- Diversion rate is calculated by determining the percentage of residential waste that is kept out of landfill through diversion programs such green bin, blue box and yard waste
- Hamilton's 2021 residential diversion rate was 43% this is the most recent data that has been confirmed by the Resource Productivity and Recovery Authority
- Current Solid Waste Management Master Plan has a target diversion rate of 65%



Performance Metric 1: Diversion Rate Post Blue Box Transition





WASTE MANAGEMENT DIVISION

Performance Metric 1: Diversion Rate Post Blue Box Transition

- 43% diversion rate in 2021 included over 35,000 tonnes of blue box material collected from single-family homes and multi-residential buildings
- As of April 1, 2025, Hamilton will not be responsible to collect or process residential blue box material, and will not have access to blue box tonnage data
- 2021 diversion rate after removing residential blue box material is 31%:
 - Total organics & yard waste = 60,557 tonnes
 - Total recyclables = 35,736 tonnes
 - Other diverted material (i.e. hazardous waste) = 8,258 tonnes
 - Total waste landfilled = 140,624 tonnes



Performance Metric 1: Diversion Rate Post Blue Box Transition

- A new target waste diversion rate must take into consideration the removal of blue box material and the performance of current waste diversion programs i.e. green bin and yard waste
- New target also considers targets for increasing the capture rate of green bin material from single-family homes and multi-residential buildings
- New target diversion rate post blue box transition is 38% by 2032



Metric 2: Capture Rate of Organics from Single-Family Homes

- Findings from 2019-2020 and 2022 single-family waste composition studies included a 44% capture rate of green bin material
- Provincial policy statement on Food and Organics established a target capture rate of 70% for all organics (including yard waste) from single-family homes by 2025
- To meet the provincial target, the capture rate of green bin material must be at least 52%
- If yard waste tonnages decrease, the green bin capture rate will need to increase to meet the target



44% Baseline

2022-2023

Data gathering including participation study, SF audit

2023

Carry out focus groups to understand resident behaviour and determine a strategy to increase participation

2024 and 2025

Implement
action items
such as targeted
education and
carry out
participation
studies

55% Target

2026 to 2033

Single-family audits to confirm capture rates and continued targeted education



Metric 3: Capture rate of Organics from Multi-Residential Buildings

- Findings from 2021 multi-residential waste composition study included a 12.5% capture rate of green bin material
- Provincial policy statement on Food and Organics established a target capture rate of 50% for all organics (including yard waste) from multi-residential buildings by 2025
- The 50% capture rate is unrealistic based on the performance of buildings and the considerably lower amount of yard waste collected from multi-residential buildings – this has been communicated to the Ministry of Environment Conservation and Parks



12.5% Baseline

2023

Develop plan to implement new program based on pilot findings

2024 to 2029

Implement program changes, gold box resources reallocated to multi-res green bin program, bi-annual waste composition studies to monitor progress

25% Target

2030

Waste composition study to measure impact of program changes against target, reassess program based on progress towards target



Next Steps

Present final two new waste performance metrics to Waste Management Sub-Committee at next meeting:

- Landfill life
- Landfill volume used annually





Item 7.8

Post-Secondary Student Waste Education

Problem: Councilors and neighbourhood associations have identified an issue with excessive and unsightly waste coming from off-campus student housing – most apparent during move out and move in times





Post-Secondary Student Waste Education

Under development! Additional engagement planned for the area.

Goal: Develop an effective outreach program to educate students living off campus on proper waste management practices

Tactics:

- Consult with students and neighbourhoods with student housing
- Face-to-face education at houses and with education booths at school and community events
- Social media education through school / student union social media accounts
- Online student education through Off-Campus Housing
- Print material advertising campaign provided during move in and move out times





Waste and Recycling Worker's Week (June 12 to 17)

- Held annually to recognize and celebrate people in the waste industry
- During this week, the Waste Facebook page had dedicated posts to celebrate and recognize waste and recycling workers
- Information was also shared on the City's social media accounts:
 Facebook, Instagram, Twitter and LinkedIn
- Photos and a video reel were shared highlighting some of the work accomplished by staff in the Waste Management Division





Item 7.9

Organics Management Strategy Update

- Draft report on technology options for processing organic material provided to staff on May 18th
- Report to be finalized by end of June
- Assessment of options to commence from July 2023 to September 2024
- Report to Public Works Committee on preferred option by end of 2024



Blue Box Transition Update

- Communication update on transition provided in June
- Transition report to Resource Productivity and Recovery Authority due on August 31st
- Report to Public Works Committee on servicing non-eligible properties scheduled for Q4 2023



Solid Waste Management Master Plan Update

- Scope of work to be completed by mid-September to be used in procurement of support work to update the Solid Waste Management Master Plan
- Present scope of work to Waste Management Sub-Committee at September meeting
- Procurement of support work to be completed in fall of 2023
- Contract for support work to be awarded by end of 2023
- Updated Solid Waste Management Master Plan completion to align with Hamilton's non-core asset management plan





Consent Items

Item 8.0

Work not Started - X Work in Progress - Work Completed - V

Item	Description	Status	Notes
1	Policies on inter- municipal partnerships	~	Establish a policy that clearly defines ability of staff to engage in partnerships with other municipalities.
2	Support community reduce and reuse programs	~	Policy created to provide greater support to programs run by community and non-profit groups that prioritize reuse and waste reduction.
3	Increased curbside enforcement	~	Project resulted in a combination of proactive and reactive enforcement strategies (i.e. on demand and complaint driven); Adjustment in staff structure; change in data reporting and creation of priority levels.
4	Update single-family waste audit methodology	~	Update methodology to provide more accurate and useable data. Audit completed in fall of 2022 with new methodology.



Item	Description	Status	Notes
5	Development options for Material Recycling Facility (MRF)	<u>~~</u>	Determine most effective use of property post blue box transition. Review ongoing on Corporate facility requirements.
6	Waste performance metrics and related policies	<u>~~</u>	Metrics for waste diversion and single-family and multi- residential capture rate of organics presented to WMSC on June 23 rd . Landfill life and annual consumption to be provided to WMSC in September .
7	Construction and demolition (C&D) waste program	<u></u>	Feasibility study/pilot for C&D waste managed by City, possible education and partnerships with private sector.
8	Existing program improvements	<u></u>	Focus on improving business recognition, waste diversion at special events & school education.
9	Trash tag program	<u>~~</u>	Review current program to identify efficiencies and opportunities.



Item	Description	Status	Notes
10	Preparation for next waste collection contract (2028)	سر	Investigate efficiencies and innovations for waste collection that could be included in next waste collection contract i.e. automated collection. Garbage cart feasibility study to commence in 2023.
11	Green procurement	×	Waste staff to contribute to development of internal policies supporting green procurement. Federal regulation to act as a guide.



Item	Description	Status	Notes
1	Multi-Residential data gathering	~	Waste audit and pilot concluded in 2021, resident survey completed. Follow-up audit conducted in 2022 and results finalized. Recommendations for program improvements presented at June 23 rd WMSC.
2	Waste design requirements	~	Revised policy approved by Council in November 2021
3	Single-use plastic (SUP) strategy	<u>~~</u>	Strategy approved by Council, implementation began in 2021 to complete action items. Staff maintaining knowledge or, and commenting on, federal regulation updates.
4	Route optimization software	<u>سر</u> ا	Three phase project. Phases 1 & 2 complete resulting in GIS based routes and route management system. Phase 3 underway which includes review and balancing of existing routes.



Item	Description	Status	Notes
5	Blue box transition	<u></u>	Transition scheduled for April 1, 2025; transition tool and roadmap developed.
6	Central Composting Facility capacity (CCF)	<u></u>	Staff exploring options for the future of the organics management. Report on options for processing organics to be finalized by July, 2023.
7	Transfer station/Community Recycling Centre Capacity	<u></u>	Feasibility of new or expanded facility as current facilities will soon surpass capacity. Staff studying potential locations and determining cost of available land.
8	Glanbrook Landfill Development	<u></u>	Expansion into stage 4 of the Landfill and improvements to the compost pad. Construction of Cells C, D & E is in progress.

