



Memorandum

TO: Regional Council
FROM: Erin Mahoney, Commissioner of Environmental Services
DATE: October 20, 2016
RE: **Clarification on Item E.2.1, October 6, 2016 Committee of the Whole**

On October 6, 2016, staff presented to Committee of the Whole Item E.2.1 *2015 Diversion Report and SM4RT Living Integrated Waste Management Master Plan Update*. The Committee sought clarification on Figure 3, "Participation rates for Multi-Residential vs. Single Family", stating that 71 per cent participation rate for single family homes was low.

Participation rates have been used to describe set out rates for single family homes, and refer to the number of households placing out blue box and green bin containers. In the 2014 single family homes audit, the participation rate for York Region was 97 per cent for blue box and 86 per cent for green bin. In multi-residential building audits, participation rates for each apartment cannot be calculated the same way as single family set out rates for each apartment unit as waste materials are mixed in common waste drop off areas. Instead, staff calculated the percentage by weight of material placed in recycling and organics for multi-residential buildings to compare the percentage by weight for single family homes using the audit data. Comparing percentage by weight from multi-residential buildings and single family homes overcomes limitations of tracking set out rates as a measure of participation in multi-residential buildings.

After Committee of the Whole, staff reviewed Figure 3 and have proposed to revise the section titled: *Waste audits at multi-residential properties provide insight into waste management behaviors and waste generation*.

It is recommend that Council receive this memo and approve the following revision to the *2015 Diversion Report and SM4RT Living Integrated Waste Management Master Plan Update*, dated October 6, 2016:

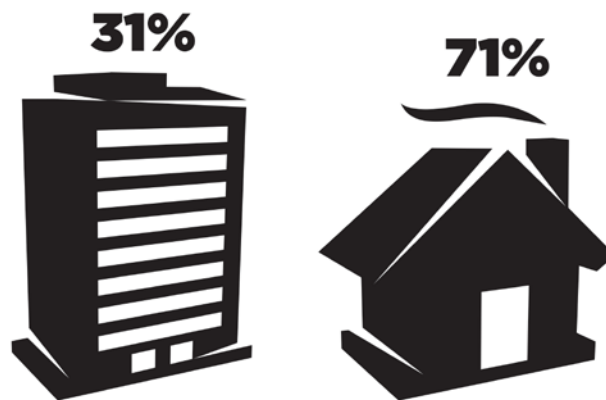
Audits were conducted in Richmond Hill in 2015 at 10 multi-residential buildings including 5 buildings that offered an organics collection program. Results show that

recycling and organics streams accounted for 31 per cent by weight of the total waste sampled in the 2015 multi-residential audit as compared to 71 per cent by weight of the total waste sampled in the 2014 single family audits, as summarized in Figure 3.

Staff is working closely with local municipalities on development standards that support continued implementation of three-stream waste collection in all new multi-residential buildings as stipulated in the York Region Official Plan.

Figure 3

**Percentage by weight of recycling and organics in
Multi-Residential vs. Single Family audits**



A copy of the revised section and changes made to the report received on October 6 can be found in Attachment 1.

In 2016, more audits are being conducted at multi-residential buildings in Aurora, Newmarket and Vaughan. Staff will evaluate results and determine the best metrics to provide insight into behaviors and generation rates to track progress on SM4RT Living Plan targets.

Erin Mahoney, M. Eng.
Commissioner of Environmental Services

LM/Im

Attachment

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Multi-residential Working Group collaborates on data gathering, programming and educational resources for growing sector

A Multi-residential Working Group was established ahead of schedule in 2014, providing opportunities for coordinated and collaborative decision-making specific to the growing multi-residential sector. Key priorities for the group include reduction and reuse initiatives through engagement and outreach efforts with multi-residential property managers and residents, as well as effective data collection and management.

In 2015, staff developed a multi-residential database in collaboration with local municipalities to store data from all municipally collected multi-residential properties and to allow data sharing across all nine local municipalities. Data includes building addresses, number of units, container types (front-end containers vs. 95 gallon carts), waste streams collected (i.e. two stream vs. three stream), number of containers, collection frequency as well as which buildings received education materials and outreach. Data for 345 municipally collected multi-residential properties across all nine local municipalities have been entered into the database. Data will be used to inform future promotion, education and outreach initiatives and to select buildings for future waste audits and pilot studies.

Integration and use of Radio Frequency Identification (RFID) technology for measuring waste collection frequency and weights at multi-residential properties is a critical component of the long-term strategic plan to increase waste diversion. In 2015, the Multi-residential Working Group investigated best practices for data collection through RFID as seen in Peel Region and the City of Markham. RFID technology is becoming a best practice in the multi-residential sector as it allows for accurate recording of collection data for all garbage and recycling containers. Markham currently uses RFID technology and all other local municipalities will be including the provision for RFID technology as part of their future collection contracts.

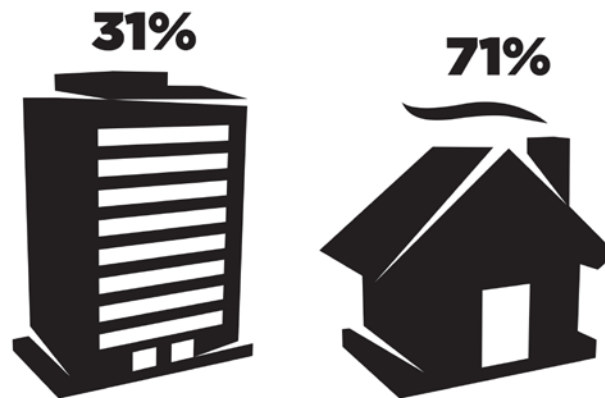
Waste audits at multi-residential properties provide insight into waste management behaviors and waste generation

Audits were conducted in Richmond Hill in 2015 at 10 multi-residential buildings; ~~where including 5 of the buildings that~~ offered an organics collection program. Results show that ~~the participation rate for recycling and organics streams accounted for residents in multi-residential buildings was for~~ 31 per cent by weight of the total waste sampled in the 2015 multi-residential audit as compared to; ~~which is significantly lower than the~~ 71 per cent by weight of the total waste sampled in participation rate seen in the 2014 single family audits, as summarized in (Figure 3).

Staff is working closely with local municipalities on development standards that support continued implementation of three-stream waste collection in all new multi-residential buildings as stipulated in the York Region Official Plan.

Figure 3

**Percentage by weight of recycling and organics in
participation rates for Multi-Residential vs. Single Family audits**



To further study this sector, additional waste audits will be conducted fall 2016 at buildings in Aurora, Newmarket and Vaughan. Best practices and audit results in multi-residential properties confirm that successful waste diversion programs must be convenient, provide residents with shared waste collection areas with clear signage and be accessible and flexible to accommodate the unique requirements of each property. Continued collaboration on data gathering and public outreach through the multi-residential working group are critical to growing these waste diversion programs.

Preliminary evaluation for source separated organics processing incorporated in 'Call for Innovators' Request for Information

The SM4RT Living Plan implementation relies on community partners and service providers to support new ideas and approaches for reduction, reuse and recycling. A Request for Information was conducted in Q4 of 2015 to scan the marketplace for new programs, services and processing technologies for all waste streams. Eighteen submissions were received, with the majority focused on technology options for green bin processing. Five potential technologies for source separated organics were identified for further exploration, all anaerobic processes with potential cogeneration of biogas for fuel. Results from the Request for Information will inform next steps as staff prepare to conduct a feasibility study to further refine requirements for long-term source separated organics processing. In August 2016, staff released a Request for Proposal for the feasibility study to find the preferred technology for source separated organics processing. The successful proponent will initiate the study in Q4 2016.