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## **2017 OPERATING BUDGET BRIEFING NOTE**

### **Additional Organics Processing Capacity**

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#### **Issue/Background:**

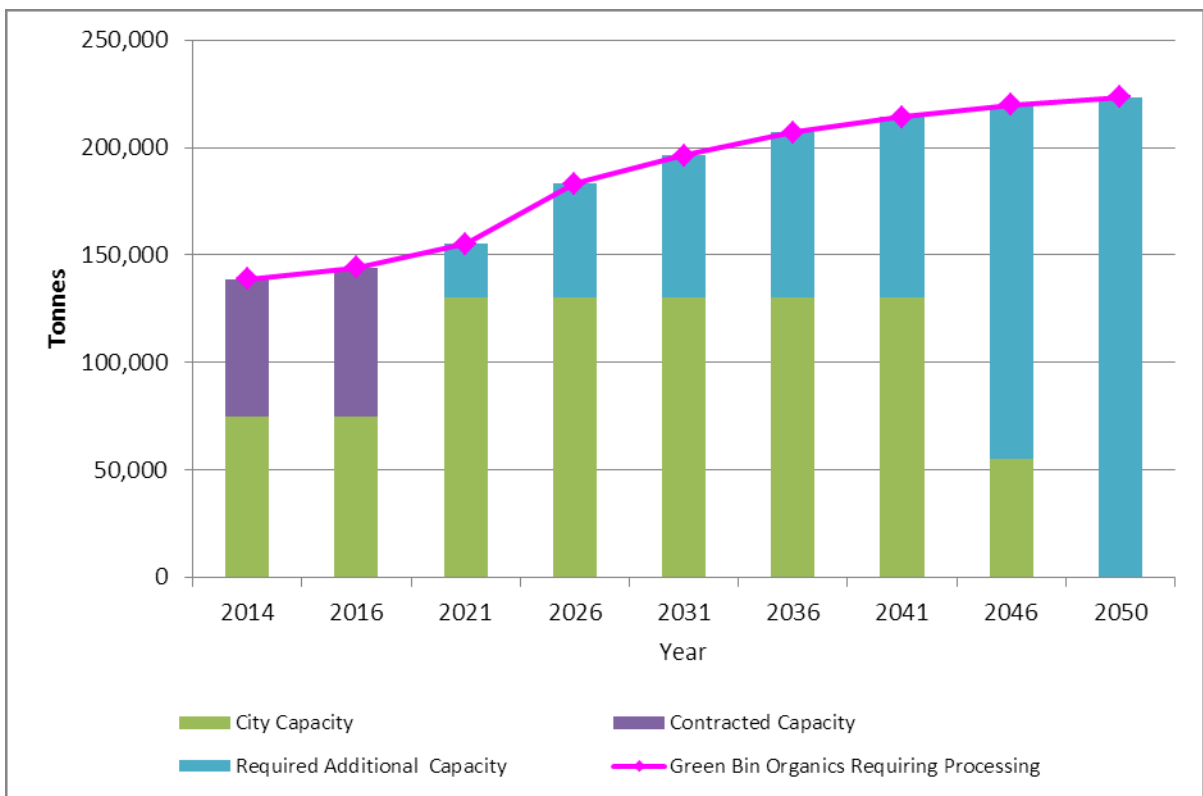
- In 2015, Solid Waste Management Services (SWMS) processed approximately 132,000 tonnes of Green Bin organics materials from residents and non-residential customers. This includes Divisions, Agencies, and Corporations (DACs), small businesses and charities, institutions and religious organizations.
- Currently there is one operating anaerobic digester organics processing facility, located on Disco Road Waste Management Facility,
  - This facility has a processing capacity of approximately 75,000 tonnes per year and a peak operating capacity of 90,000 tonnes per year.
- A second organics processing facility is located at the Dufferin Waste Management Facility.
  - This facility is currently not in operation but undergoing construction an expansion to increase the facility's processing capacity.
  - After the expansion is completed, anticipated to be in Q4 2018, it will have a 55,000 tonnes per year processing capacity, with a peak capacity of 65,000 tonnes per year.
- After completion of the expansion of the Dufferin Organics Processing Facility, the City of Toronto will have a combined processing capacity of approximately 130,000 tonnes per year, with a peak of 155,000 tonnes per year.
- The City of Toronto also has three (3) processing contracts with private organics processing facilities. These contracts have been established to manage tonnage at the curb in excess of the City's current capacity and to continue to support the City's Green Bin program.
  - Processing capacity of these three (3) contracts total 85,000.

#### **Key Points:**

#### Consideration as part of the Long Term Waste Management Strategy

- As part of the Long Term Waste Management Strategy ('Waste Strategy'), the project team examined the City of Toronto's organics processing capacity and forecasted projected tonnes to determine the need and timing for securing additional capacity.

- Future organics processing considerations looked at forecasted changes to tonnage quantities based on generation rates, population and household growth, and economic indicators.
  - Long-term projected tonnes also include the impacts resulting from the implementation of the Waste Strategy.
  - The forecasting also assumes that all existing contracts with private organic processing facility operators are utilized, which would see contracts extend to 2019.
- The following graph represents the forecasted tonnes requiring management and processing capacity.



- Based on the work undertaken as part of the Waste Strategy, it is anticipated that the City of Toronto will have sufficient organics processing capacity to approximately 2020.
- Provided the amount of organics requiring management in 2020 and forecasted tonnages within the City's Green Bin program, a third organics processing facility may not be required until 2026-2031, as there will not be sufficient tonnes of organic materials until then to support this investment.

- There is however, potential opportunity to make a business case for earlier timelines for planning and securing additional capacity by considering the following:
  - Providing and marketing additional capacity to private or municipal entities with a long-term tonnage commitment.
  - Securing long-term operating and capital support to finance the facility.
  - Leveraging future Provincial/Federal funding programs associated with greenhouse gas (GHG) Emission; Cap and Trade Program; Climate Change, etc. Funding may advance timing of the construction of additional capacity.

#### Risk management and mitigation

- Risk management and mitigation planning is being undertaken as an on-going assessment of the City's organics processing capacity needs. Other variables that staff will continue to monitor include:
  - Planning of the Mixed Waste Processing Facility with Organics Recovery should take into account the potential need for long-term organics processing capacity for recovered organic materials, which could include investigating opportunities to co-manage similar organic waste streams.
  - Roll out of the larger Green Bins to single family residential customers, which could impact the quantities of organics material requiring management.
  - Maturation of the Green Bin organics in multi-residential building could impact the amount of organics materials, as resident participation in the program increases through actions undertaken by the City of Toronto to continue supporting diversion in this sector.
  - As part of the Provincial Strategy required under the Waste-Free Ontario Act, the Province is developing an Organics Strategy, which could include a ban of this material from landfill. Implementation of the Organics Strategy could have implications on the demand for organics processing capacity in the Province.
  - Implementation of a food waste reduction strategy is recommended as part of the Waste Strategy. The successful implementation of this strategy will reduce the amount of Green Bin organics requiring management and therefore should reduce the need for additional organics processing capacity.

#### **Questions & Answers:**

Q1. Is it possible to expand the existing organics processing facilities?

- A1. Expansion for additional capacity is possible, however reconfiguration of the sites is necessary to accommodate installation of new processing equipment.
- Q2. Is it possible to site a third organics processing facility at one of the City's other transfer station/facility?
- A2. There is a possibility to build a third organics processing facility at other City facilities, provided that there is a business case to pursue additional processing capacity.
- Q3. What is the timeline for building a third organics processing facility?
- A3. Is it anticipated that siting and planning approvals would require approximately two to three years. Procurement to retain professional services to undertake the preliminary design, design/build and operate/monitoring tasks will take approximately one year. Construction of the facility could take approximately two to three years to complete. The combined length of time from siting to completed construction could take approximately five to seven years after a decision is made to pursue construction of a third organics processing facility.
- Q4. What would the siting exercise for a net-new location for an organics processing facility entail? In terms of completing environmental reviews and obtaining approvals such as Environmental Compliance Approvals? What would the timing and cost be?
- A4. Capacity sizing would mainly drive site requirements and the land requirement to site an organics processing facility is approximately three to five 5 hectares. Siting an organics processing facility is a complex process, involving a site selection process, site plan approvals, possibly zoning approvals, and public consultations. Environmental Assessments may also be required. Detailed approvals, such as Environmental Compliance Approvals and building permits could be undertaken as part of the preliminary design process and Design Build/Operate Maintain contract. Timing is as outlined in the answer to Question 1 above (five to seven years) and it is estimated that a facility will cost \$1M for every one tonne to be processed.

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**Date:** November 30, 2016