

## PROCESSING ORGANIC MATERIAL AND OPTIONS TO EXPAND THE PROGRAM

### Background

Organic material can include food scraps, soiled or non-recyclable papers and leaf & yard trimmings. However, Greater Sudbury distinguishes the material in two distinct categories:

- Leaf & yard trimmings and;
- Organic materials (food scraps and soiled or non-recyclable papers)

The handling and processing of leaf & yard trimmings is permitted and licensed at the Azilda, Hanmer and Sudbury Landfill & Waste Diversion Sites. The handling and processing of organic material is only permitted and licensed at the Sudbury Landfill & Waste Diversion Site.

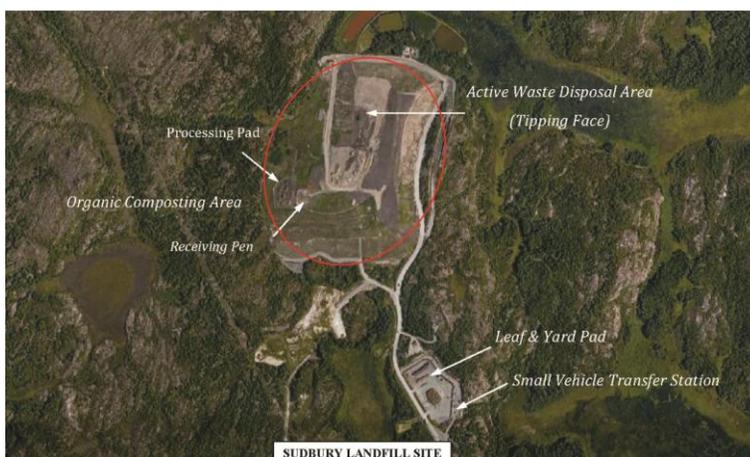
This report will concentrate on the processing of organic materials and options to expand the program.

#### Organic Collection & Processing Method

Approximately 60,000 residents have access to Greater Sudbury's weekly roadside co-collection of Green Cart Organics and Blue Box Recyclables. Although organic participation rates are low, increases are expected over time as we transition to a lower garbage bag limit and lower garbage collection frequency.

Approximately 72 municipal facilities and schools are on a centralized cart or container system.

Collected organic material is delivered to the Organic Composting Area located within the Sudbury Landfill & Waste Diversion Site. The material is offloaded in the Receiving Pen, inspected and documented. The removal of visible contaminants is a shared duty between the Hauler delivering the organic material and the Site Operator processing the material. A bulking agent such as wood chips is added to absorb liquids and mask potential odours. The pre-processed material is moved from the Receiving Pen to the Processing Pad and placed in windrow (triangular) piles. Temperature and other important features are monitored and windrows are turned on a regular basis to complete the composting process. Additional bulking agents are added when required. After completing the process the compost material is tested, measured, screened and piled at a suitable location for sale or reuse.



### Environmental Compliance Approval for Organic Processing

The current Ministry of the Environment and Climate Change approval permits the receipt of a maximum of 100 tonnes of organic material per operating day. The system currently receives approximately 10% of the permitted capacity. This is expected to climb to approximately 20-25% of the permitted capacity by 2021/22.

### Organic Composting Area and Maintenance Requirements

The Organic Composting Area is located in the southwest part of the landfill disposal footprint. The area was constructed on top of buried garbage. This processing area is temporary and will need to be relocated once the area is required for landfilling. The new location(s) and how to process organic materials was scheduled to be reviewed as part of the Solid Waste Master Plan update tentatively scheduled to commence in 2021.

The current Organic Composting Area was upgraded in 2009 and undergoes regular repairs due to naturally occurring settlement and normal wear and tear.

### Operating Capacity and Limitations

The operating system is expected to be sufficient to process the organic material received from the current program users, other potential residential sources, including the expected increases over the next few years. There's also capacity under the current system for additional but limited material from new sources (retail establishments, hospitals, etc.).

The current operating system would not have the capacity to process all organic materials from all sources within Greater Sudbury. This is especially true if the proposed Provincial ban on food waste is implemented by 2022/23.

### Operating Capacity - Future

Since the Province is reviewing a potential ban of food waste by 2022/2023, staff will be expediting the review of a long term organic processing system.

The review will involve estimating the potential quantities of organic material in the waste stream followed by a review of proven processing technologies, location possibilities, regulatory requirements, feasibility & funding grants and how the new site would impact the current integrated waste management system. This review would be funded from the Solid Waste Capital Envelope.

Greater Sudbury Utilities will collaborate in the review since certain organic processing systems involve energy production.

Staff will provide the Committee with regular updates and seek input at various stages of the process.

## Options for Organic Expansion under the Current Processing System

This report is a follow-up report to the November 16, 2015 presentation to the Operations Committee regarding the 2015-2020 Solid Waste Strategy. During the presentation, staff indicated that an update on the options to expand the Organics Program would be provided in 2017.

The following programs have been developed for the Committee's consideration:

### **Program #1 – “Biz Cart” Organic Program for small non-residential generators**

The establishment of a “Biz Cart” organic collection program would provide small non-residential generators on a residential collection route with an opportunity to divert organic material. The program would be established on a cost recovery system similar to the “Biz Bag” (3 bag) program for the collection of garbage and “Biz Box” (3 box) program for the collection of blue box recyclables. The City would waive the processing fee to encourage diversion.

Approximately 32 non-residential generators participate in the “Biz Bag” program and approximately 127 non-residential generators participate in the “Biz Box” program.

#### ***Staffing Resources***

*Additional staff hours to administer this new program would be required. The estimated annual investment would be \$2,000.*

#### ***One-time Operating Funds***

*No additional requirement.*

#### ***Operating Funds***

*No additional requirement. The new program would be set-up in a manner to offset operating costs with revenues received from the small non-residential generator.*

#### ***Future Operating Impacts***

*Additional processing funds would only be requested when processing rates or tonnes increase.*

*Tipping fees may eventually decrease with this option. However, staff will continue to use a three year rolling average to budget tipping fee revenues.*

#### ***Capital Funds***

*Capital funds will be required in the future to maintain the Organic Composting Site.*

*Waste diversion initiatives will save landfill space! This helps postpone expensive site closures and future landfill capital requirements.*

## **Program #2 – Organic Collection for the Industrial, Commercial & Institutional Sector**

The establishment of an organic collection program for the Industrial, Commercial and Institutional Sector would provide an opportunity for this sector to divert their organic material. The program would be set-up on a partial cost recovery system similar to the school program.

The City would provide training to participants, educational materials, recommendations on site set-up, co-ordination with collection haulers and waive the processing fee to process the organic material. The participating organizations would be responsible for their own collection costs, bear-resistant collection containers and certified compostable bags.

Due to possible processing limitations, staff would limit participation so as to not jeopardize the City's abilities to process the residential material. The City currently has a waiting list of eight organizations waiting to join the City's program. Four organizations have provided a letter of support (refer to appendix A) and the other four have verbally indicated their interest in participating in the program. A local waste management company has also indicated that a portion of their clients are interested in participating.

### **Staffing Resources**

*The staffing required to administer this new program would be handled by converting two part time positions to one full time position. No additional investments would be required for this conversion.*

### **One-time Operating Funds**

*No additional requirement.*

### **Operating Funds**

*Additional operating funds of \$5,000 would be required for processing the additional material.*

### **Future Operating Impacts**

*Additional processing funds would only be requested when processing rates or tonnes increase.*

*Tipping fees may eventually decrease with this option. However, staff will continue to use a three year rolling average to budget tipping fee revenues.*

### **Capital Funds**

*Capital funds will be required in the future to maintain the Organic Composting Site.*

*Waste diversion initiatives will save landfill space! This helps postpone expensive site closures and future landfill capital requirements.*

### **Program #3 - Special Events Organics Collection Program**

In 2016, the City supported numerous special events which provided recycling services for over 50,000 event attendees. A similar program for the diversion of organic material at special events would complement the existing recycling program and provide event organizers with a system to segregate organic material from their event garbage.

Staff have received numerous requests over the years for this service.

#### ***Staffing Resources***

*Additional staff hours to administer this new program would be required. The estimated annual investment would be \$10,000.*

#### ***One-time Operating Funds***

*No additional requirement.*

#### ***Operating Funds***

*Additional funds would be required to provide and retrieve the Special Event's collection containers and to service the containers at the Special Event sites. The estimated annual investment would be \$30,000.*

#### ***Future Operating Impacts***

*Additional collection or processing funds would only be requested if required.*

*Tipping fees may eventually decrease with this option. However, staff will continue to use a three year rolling average to budget tipping fee revenues.*

#### ***Capital Funds***

*Capital funds will be required in the future to maintain the Organic Composting Site.*

*Waste diversion initiatives will save landfill space! This helps postpone expensive site closures and future landfill capital requirements.*

### **Program #4 - Organic collection for multi-unit residential properties on a centralized collection system**

The City manages 404 multi-unit residential properties which represents 13,463 household units. Approximately 97 of the 404 properties receive roadside collection, including Green Cart Organic collection. The remaining 307 properties are serviced by a centralized collection system. This system is currently limited to garbage and recycling collection services.

Providing organic collection to the remaining portion of the residential sector is the next logical step in the City's Solid Waste Strategy.

This expansion would be a significant undertaking that would take approximately four years to implement and all centralized collection containers would be bear-resistant. Implementation over a shorter time period would require additional staffing.

### **Staffing Resources**

*A contract position and part time staff would be required to oversee the planning, implementation and ongoing maintenance of the program. The estimated annual investment would be \$122,000.*

### **One-time Operating Funds**

*A one-time investment would be required for the printing of educational materials, the provision of kitchen collectors, sample certified compostable bags and other miscellaneous items related to this new program initiative. This one time investment is estimated at \$91,000.*

### **Operating Funds**

*Additional operating funds of \$550,000 (\$137,500 for 2018, \$137,500 for 2019, \$137,500 for 2020 and \$137,500 for 2021) would be required to provide centralized collection services and processing.*

### **Future Operating Impacts**

*Additional collection funds would only be requested if quantities increase over time or if the centralized containers were to require more frequent servicing.*

*Additional processing funds would only be requested when processing rates or tonnes increase.*

*Tipping fees may eventually decrease with this option. However, staff will continue to use a three year rolling average to budget tipping fee revenues.*

### **Capital Funds**

*Capital funds will be required in the future to maintain the Organic Composting Site.*

*Waste diversion initiatives will save landfill space! This helps postpone expensive site closures and future landfill capital requirements.*

## **Conclusion and Next Steps**

Expanding the organic program provides the community with an opportunity to participate in the City's overall waste diversion efforts. These efforts contribute to extending landfill life and postpone the significant costs relating to siting, permitting and constructing new disposal systems. The expansion also prepares Greater Sudbury in meeting the proposed legislative requirement on a food disposal ban.

Staff continues to recommend funding diversion programs using a combination of user fees and the tax levy. This encourages participation in more sustainable and environmentally responsible activities.

If the proposed programs are endorsed, the program details will move forward as business cases to be considered by Council as part of the 2018 Budget deliberation.