

Request for Decision

Processing Organic Material and Options to Expand the Program

Presented To: Operations Committee

Presented: Monday, Sep 18, 2017

Report Date: Wednesday, Aug 30, 2017

Type: Presentations

Resolution

THAT the City of Greater Sudbury directs staff to prepare a business case for each of the programs described in the report titled "Processing Organic Material and Options to Expand the Program" from the General Manager of Growth and Infrastructure dated August 30, 2017 for consideration for inclusion in the 2018 municipal budget.

Relationship to the Strategic Plan / Health Impact Assessment

Currently related to an operational matter.

Report Summary

Greater Sudbury currently collects and processes organic material from approximately 60,000 households and 72 municipal facilities and schools. Although processing capacities are not unlimited, staff have outlined options to expand the program for small non-residential sources, the Industrial, Commercial & institutional Sector, for Special Events and for Multi-unit Residential Properties.

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.

Signed By

Report Prepared By

Chantal Mathieu
Director of Environmental
Digitally Signed Aug 30, 17

Health Impact Review

Chantal Mathieu
Director of Environmental
Digitally Signed Aug 30, 17

Recommended by the Department

Tony Cecutti
General Manager of Growth and
Infrastructure
Digitally Signed Sep 1, 17

Financial Implications

Liisa Brule
Coordinator of Budgets
Digitally Signed Sep 1, 17

Recommended by the C.A.O.

Ed Archer
Chief Administrative Officer
Digitally Signed Sep 6, 17

Financial Implications

If approved, staff will prepare separate business cases for each program identified to be considered in the 2018 Budget.

The financial consideration for each of the four programs in 2018 is as follows:

Program #1 - \$2,000 in staffing resources for the "Biz Cart" organic program for small non-residential sources; and

Program #2 - \$5,000 for operating and the conversion of two part time positions to one full time position for the organic collection program for the Industrial, Commercial & institutional Sector; and

Program #3 - \$40,000 for staffing and operating resources for the Special Events Organics Collection Program; and

Program #4 - \$259,500 for staffing and operating resources and one-time funding of \$91,000 for the organic collection for multi-unit residential properties.

In years 2019 to 2021 there will be an additional investment of \$137,500 per year for operating resources for Program #4.

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.

Appendix A – Letters of Support



Health Sciences North
Horizon Santé-Nord

June 7, 2017

City of Greater Sudbury
P.O. Box 5000 Stn A
Sudbury, On
P3A 5P3

Dear Chantal

RECEIVED

JUL 11 2017

CITY OF GREATER SUDBURY
ENVIRONMENTAL SERVICES

The Ontario Hospital Association's Waste Management Award recognizes a hospital that has reduced their environmental impact through waste prevention, reduction, or beneficial treatment. In addition to conventional waste diversion programs, the waste management award recognizes efforts to improve the environment, find alternative markets or end-users for waste materials, or reduce the impact of waste through waste processing.

Health Sciences North was one of the finalists for the Green Health Care Awards for 2015. To continue on the "green" path, we recognized that there are many other initiatives to reduce waste to landfill. One of which we will require the city's support and approval.

In the past 3 years we have reached out to the city to be part of the composting projects, sadly we were not successful in participating in the trial stages. We understand that the city may not be equipped to accept all of our compostable waste at this time. However we would like to be considered and included in the compost program so that we can meet our goal of a Green Health Sciences North by 2020.

We recognize that this endeavour will take some time to bring to fruition and there is some champions that will require some training. If we start small and increase as we become familiar with the process I am confident that we can meet the 2020 goal.

As we prepare for this venture we have gathered some metrics to assist the city in recognizing just how much the hospital is able to contribute to reducing waste to landfill.

We have estimated that, through two Tim Horton's on site, a large cafeteria and our food services department, we dispose of over 100kg of coffee grinds daily.

Starting our composting project this fall with the city's support would be greatly appreciated.

If you have any questions please do not hesitate to reach me at 705-523-7100 ext. 3050 or by e-mail ddorion@hsnsudbury.ca

Best Regards,

Diane Dorion
Manager Housekeeping Operations
Ramsey Lake Health Centre



Mark Browning
Owner
Tucos Taco Lounge
582 Kathleen Street, Sudbury ON
P3C 2N4
705.222.9387

July 18, 2017

To Whom It May Concern,

I'm writing this letter to add my encouragement to Sudbury City Council to institute a COMMERCIAL compost program for restaurants.

Since Tucos opened in late 2014 we have been committed to RECYCLING, COMPOSTING, and using a minimal of disposable products- thereby reducing as much as possible our environmental impact on our community. Initially, our compost was taken by a local farmer/gardener- but when he passed away in 2016, we were left with the choice to compost ourselves, or add our pure compost to the city landfill. We build a paddock on our property across the street to house the material, but it couldn't keep up with the volume generated. Two weeks ago, we had to swap our recycling bin for a garbage bin- the first time we've had to do this- primarily to dispose of compost. We generate on average 1-2 tons/week of compost- that is currently going into landfill. It bugs me to waste such excellent organic compost.

I know the City of Greater Sudbury is trying to reduce the volume coming into its landfill- hence the residential bag limit reduction from 3 to 2 bags. I believe a COMPOST PROGRAM for restaurants in particular will help further this endeavor dramatically. Our restaurant is used to composting so for us it will be easy- some other restaurants obviously will need some training but, I'm sure management/owners will be happy to reduce their costs.

I would be happy to volunteer my time to advise as needed on this project- and we'd be happy to start this IMMEDIATELY. As I said, every week of delay adds another 1-2 tons of organic compost into the City landfill where it is wasted.

Sincerely,

Mark Browning



Sudbury & District

Health Unit

Service de
santé publique

*Make it a
Healthy
Day!*

*Visez Santé
dès
aujourd'hui!*

Sudbury

1300 rue Paris Street
Sudbury ON P3E 3A3
☎ : 705.522.9200
☎ : 705.522.5182

Rainbow Centre

10 rue Elm Street
Unit / Unité 130
Sudbury ON P3C 5N3
☎ : 705.522.9200
☎ : 705.677.9611

Chapleau

101 rue Pine Street E
Box / Boîte 485
Chapleau ON P0M 1K0
☎ : 705.860.9200
☎ : 705.864.0820

Espanola

800 rue Centre Street
Unit / Unité 100 C
Espanola ON P5E 1J3
☎ : 705.222.9202
☎ : 705.869.5583

Île Manitoulin Island

6163 Highway / Route 542
Box / Boîte 87
Mindemoya ON P0P 1S0
☎ : 705.370.9200
☎ : 705.377.5580

Sudbury East / Sudbury-Est

1 rue King Street
Box / Boîte 58
St.-Charles ON P0M 2W0
☎ : 705.222.9201
☎ : 705.867.0474

Toll-free / Sans frais
1.866.522.9200

www.sdhhu.com

July 31, 2017

VIA EMAIL

Nataly Wissell
Field Educator & Program Co-ordinator
Environmental Services Division
City of Greater Sudbury

Dear Ms. Wissell:

Re: Letter of Support for the City of Greater Sudbury proposal to extend the municipal organic collection and composting Green Cart Program to the non-residential sector

On behalf of the Sudbury & District Health Unit, please accept this letter of support for the City of Greater Sudbury proposal to extend the organic collection and composting Green Cart Program to the non-residential sector.

We are pleased that the City of Greater Sudbury is considering this expansion of the existing Green Cart Program in an effort to further reduce the amount of waste being sent to local landfills.

How waste is handled and reliance on landfills has many links to the environment and our health. For example:

- Organic matter that is dumped in landfills produces methane gas, a greenhouse gas that is 21 times more potent than CO₂ in terms of global warming. Composting organic matter is a better choice to mitigate the environmental and health effects of climate change.
- Building more landfills uses viable land that could remain untouched or used for developments that directly support local residents, such as recreational areas or local agriculture. Maximizing diversion options such as recycling and composting are important measures in reducing our reliance on landfills.

Increasing diversion of organics from non-residential sectors and reducing waste are very positive for Greater Sudbury residents and are significant steps in moving our community toward an environmentally sustainable future.

We are committed to working with partners such the City of Greater Sudbury, to foster healthy environments that support health for everyone. We support the expansion of the municipal organic collection and composting program to the non-residential sector and look forward to participating in future phases of this project.

Should you have any questions, please contact Jane Bulloch, Health Promoter, at 705.522.9200, ext. 764.

Sincerely,

Stacey Laforest
Director, Environmental Health Division

SL:ja



100 chemin Ramsey Lake Road, Sudbury, Ontario, P3E 5S9
(705) 522-3701 (705) 522-4954 fax / téléc. sciencenorth.ca

Greater Sudbury
Environmental Services Division
200 Brady St,
Sudbury, ON P3A 5P3
Attention: Nataly Wissell,
Field Educator & Program Co-ordinator


August 8, 2017

Nataly & team,

The Science North Green team has been working over the past several years to implement changes within our Centres to minimize the environmental impact of our operations on City run landfill sites. Some changes and improvements implemented by the team include; a battery recycling program, paper reduction program, installation of water bottle refill stations, hand dryer installations, and education for staff and visitors regarding proper disposal of garbage and recycling.

A goal for the Science North Green team is to continue our waste reduction by improving garbage and recycling collections both inside and outside the Centres. We are reaching out to your team to offer our support in the implementation of a Commercial Composting Program. The Science North Green team fully supports the implementation of a Commercial Composting Program through Greater Sudbury. A waste reduction program supported by the Centre has the potential to improve awareness with local visitors, as well as, visitors travelling from many other geographical locations within and outside Canada.

Yours Truly,


Mark Gibson
Manager, Facilities Infrastructure
Green Team Co-Chair
Angela McCandless, CPA, CGA
Senior Accountant
Green Team Co-Chair

cc: Members of Greater Sudbury Council



Processing Organic Material and Options to Expand the Program

Presented by:
Aziz Rehman & Renee Brownlee
September 18, 2017



Co-collection System



The City provides weekly co-collection of Green Cart Organics and Blue Box Recyclables to approximately 60,000 residents.

Non Residential Collection Systems



The City provides organic collection to approximately 72 municipal facilities and schools.



All collected organic material is delivered to the Organic Composing Area located within the Sudbury Landfill.



The City utilizes the windrow method to process its organic material.

- Environmental Compliance Approval
- Area & Maintenance Requirements
- Operating Capacity & Limitations
- Future Operating Capacity
 - estimated quantities
 - review of proven processing technologies, location possibilities, regulatory requirements, feasibility & funding grants, impact to current integrated waste management system.
 - collaboration with Greater Sudbury Utilities
- Regular Updates/Consultation with Committee

Strategy 5

Expand the Organic Program



- Organic Collection for Multi-Unit Residential Properties on a Centralized Collection System **Update in 2017**
- Industrial, Commercial & Institutional Organic Waste **Update in 2017**
- Special Events Organic Collection Program **Update in 2017**

Program #1: Biz Cart

- Compliments existing Biz Box recycling and Biz Bag garbage program
- Minor investment with quick payback



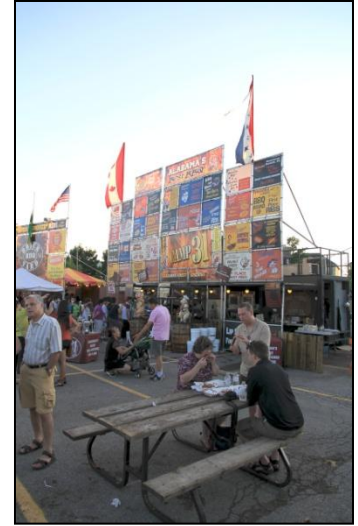
Program #2: IC&I Sector

- Waiting list to join program
- Equipment and services available
- Minor investment with quick pay back
- Education is the key



Program #3: Special Events

- Supported over 50,000 attendees in 2016 – recycling
- Equipment and services available
- Challenging
- Education is the key
- Minor investment with long pay back period
- Community oriented, complements existing recycling program



Program #4: Multi-unit Residential

- 97/404 properties - roadside
- 307/404 properties – centralized
- Implementation – 4 years
- Challenging
- Education is the key
- Large investment with long pay back period
- 99% of residents

COMPLETED



Next Steps

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.

Questions?