

# Solid Waste Management Plan and Waste Diversion Initiatives

Updated December 2020



# History

In 1994, the former Regional Municipality of Sudbury initiated a waste management systems plan to develop landfill disposal capacity for a 20 year planning period. The process was multi-faceted, included public consultation and recommended a variety of diversion initiatives, new system processes and a vertical expansion of the Sudbury Landfill. The recommendations were approved and the City received an amended Environmental Compliance Approval in 2002.

In 2003, the City initiated a solid waste optimization study. The study included public consultation and recommended a preferred co-collection system and various new processing systems. These systems were adopted in principle in 2005. Requests to proceed with system components were approved and implemented over a 4 year period. The recommendations from the study are documented in this document.

In 2019, staff requested permission to update the Solid Waste Management Plan. The updated plan once finalized would provide the City, citizens, businesses and other stakeholders with a clear direction on how to achieve shared solid waste management goals for the next ten years. The overarching goal of the plan would be to develop a sustainable waste management system that minimizes the quantity of waste requiring handling and disposal and maximizes waste diversion opportunities. An extensive public consultation process would be incorporated in the project. The approval to proceed was granted and the project is now seeking budgetary approvals.



## Our Mission

To ensure the delivery of an integrated, cost-effective, and environmentally sound solid waste management system while promoting waste reduction, reuse and recycling.

## Our Values

### Responsiveness and Education

Continually educating ourselves and our community regarding recycling and proper waste management processes, while anticipating and providing timely responses in an honest and professional manner to our community.

### Innovation and Continuous Improvement

Embracing new and better ways to achieve improved results through creativity, cross-training, coordination, inventiveness, teamwork, and adoption of appropriate new processes and technology amongst ourselves and with various stakeholders and organizations.

### Environmental Responsibility

Ensuring the collection and management of solid waste and recovered materials in an environmentally sound and safe manner and in accordance with regulatory requirements.

### Strategic Thinking

Committed to implementing projects, programs, and processes that promotes the 3R's and that extends the lifespan of our assets while meeting our current needs and challenges while anticipating the needs and challenges of the future.

## Preferred System - adopted in 2005

### Co-collection

#### Household Garbage

- Up to 3 bags per week

#### Leaf & Yard Trimmings and Christmas Trees

- Unlimited quantity per week

### Co-collection

#### Blue Box Recyclables

- Unlimited quantity per week
- One stream

#### Household Organics

- Unlimited quantity per week
- One stream

Ensure that the **four waste streams** will be collected:

- on the same day;
- at the same collection location; and
- no earlier than 7 a.m.

## Processing

### Blue Box Materials

- Invest in a one-stream processing system
  - To facilitate co-collection of blue box recyclables with another stream of waste (green cart organics).
  - To attract blue box recyclables generated from municipalities outside City of Greater Sudbury boundaries.
- Expand and segregate the drop-off pad at the Recycling Centre

### Organics

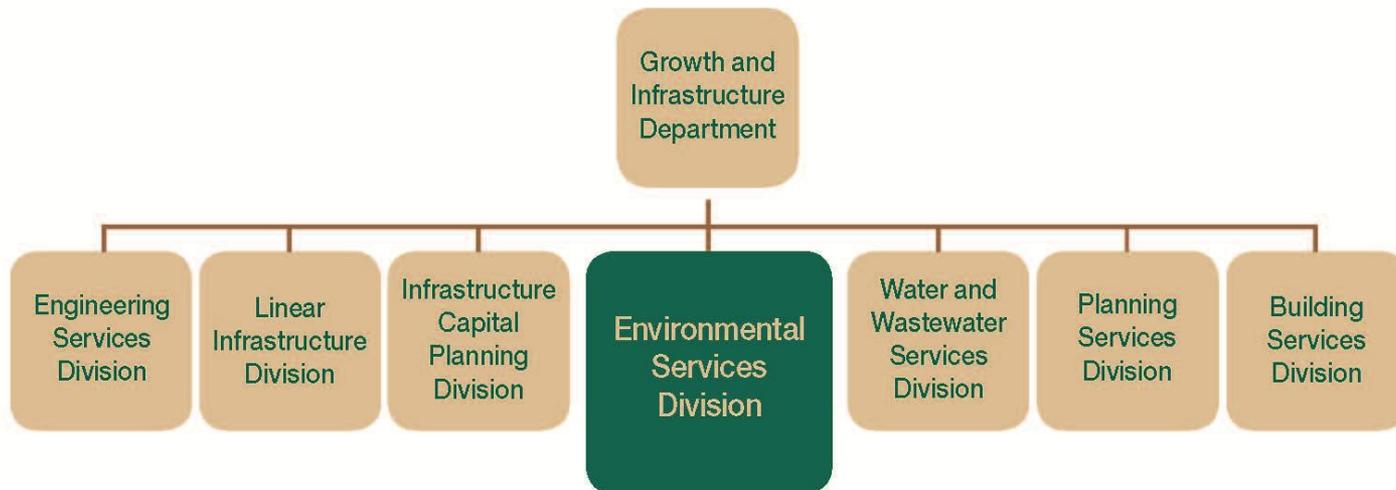
- Establish windrow organic pad within the Sudbury Landfill Site
  - Cost to construct organic pad to be funded from Solid Waste Reserves
  - Turning equipment – use existing landfill equipment
- Review “Greener” processing systems (i.e. anaerobic digester) at a later date

### Disposal

- Residue to be landfilled
- Generate electricity from the landfill gas collection system
- **Greater Sudbury should continue to lobby the federal and provincial governments to support municipalities with waste management programs with appropriate legislation, funding and fiscal policy**
- **Greater Sudbury should monitor the waste composition regularly to provide feedback on the effectiveness of the overall waste management system and public communication program**
- **Review additional waste diversion options for the high density residential, multi-type, commercial, institutional and industrial sectors.**

# Growth & Infrastructure

## Environmental Services



The Environmental Services Division's **principle responsibility** is the planning, design, approvals and operation of all solid waste programs and facilities.

# Environmental Services Sections

Collection & Recycling

Waste Processing & Disposal

Solid Waste Support Services



# Waste Collection

## Low-density residential buildings (6 units or less) receive:

- Weekly garbage collection for one approved garbage container
- Weekly leaf & yard trimmings collection for an unlimited amount of approved containers
- Weekly large furniture and appliance collection
- Weekly Blue Box recycling collection for an unlimited amounts of approved containers
- Weekly Green Cart organics collection for an unlimited amount of approved containers
- Collection of household hazardous waste by appointment





# Waste Collection

High-density residential buildings (7 units or more) on a curbside collection system receive:

- Weekly garbage, leaf and yard trimmings, recycling and Green Cart organics collection by agreement with property owner
- Collection of household hazardous waste by appointment

High-density residential buildings (7 units or more) on a centralized collection system receive:

- Weekly garbage, recycling and organic collection by agreement with property owner
- Collection of household hazardous waste by appointment

Multi-type properties receive:

- Weekly waste collection services to the residential dwellings within the property (based on terms and conditions listed in agreement with the property owner)





# Waste Collection

## Residential Drop-off Depots





# Waste Collection

Industrial, commercial and institutional buildings receive:

- Weekly yellow box recycling collection by agreement
- Weekly yellow bag garbage collection by agreement
- Weekly yellow cart organic collection by agreement





# Waste Collection

The provision of:

- Green carts and Kitchen collectors
- Blue Boxes
- Big Blue large-capacity recycling container with lid





# Waste Collection

## Support Programs



Special Support Program  
Rebate for Cloth Diaper  
Program



Special Support Program  
Garbage Container Limit  
Exemption for Diaper Waste



Special Support Program  
Garbage Bag Tags due  
to Medical Circumstances



Special Support Program  
Rebate for Dog Waste  
Digester



Special Support Program  
Garbage Container Limit  
Exemption for Pet Waste



Schedule a home visit by calling  
City Services at 3-1-1



# Litter Collection

## Clean Up Programs

Adopt-a-Road	Adopt-a-Spot	Adopt-a-Bin
		
Adoptez une route	Adoptez un endroit	Adoptez un récipient

**Adopt-a-Road:** Adoption of 2 km section of roadway. The group would have the responsibility of picking up litter in that section of the roadway twice a year.

**Adopt-a-Spot:** Adoption of a public spot. The group would have the responsibility of picking up litter in their spot twice per year.

**Adopt-a-Bin:** Adoption of a public roadside litter bin. The group would have the responsibility to service that bin over and above the once a week service provided by the City.





# Litter Collection



The annual two-hour Clean Up Blitz is scheduled every Spring. Interested individuals are asked to pre-register to participate in this two hour collection of roadside litter.

## Litter Abatement

One part-time City crew collects roadside litter and maintains litter containers across the City. This service is supplemented each spring with two Automated Litter Collection Units and with student crews that collect roadside litter.





# Processing Recyclables



Recycling Centre, 1825 Frobisher Street, Sudbury





# Processing Services

Electronic Waste & Tires





# Processing Services

Leaf and Yard Trimmings & Organics

Leaf and yard trimmings, Christmas trees



Organics





# Processing Services

Concrete & Other Wood Waste



Other wood waste



Concrete, brick and block



# Processing Services

## Scrap Metal, Appliances, Cloth & Recyclables





# Processing Services

## Household Hazardous Waste



Stewardship Ontario



Household Hazardous Waste Depot



Automotive  
Materials  
Stewardship





# Disposal Services

The City of Greater Sudbury owns and operates (via private contractors) three active landfill sites, two closed landfill sites and one small vehicle transfer station.

The operating landfill sites are located in Sudbury, Hanmer and Azilda. The small vehicle transfer station is located in Walden.

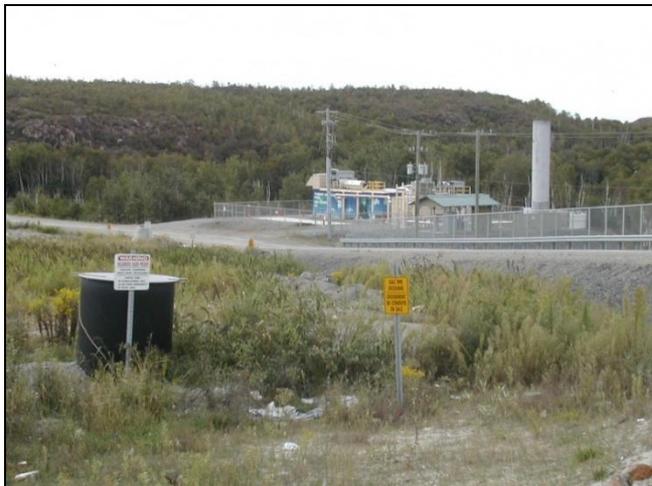


Small Vehicle Transfer Station



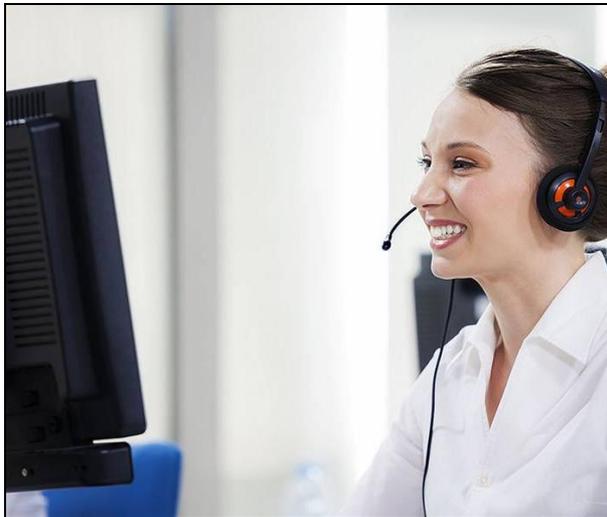


# Disposal Services





# Customer Service



- Requests
  - In-person
  - Over the phone
  - By e-mail
  - By mail

**active**NETWORK | CITIZEN REQUEST

part of the Citizen Access Suite™



# Educational Services

The Promotional and Educational Program is intended to provide residents with the necessary information to properly dispose of waste and to encourage the 3R's - reduction, reuse or recycling of waste.

The program is reviewed annually and typically includes the following activities:

- Letters, flyers or newsletters to residents
- In person at the resident's home
- Public Service Announcements
- Oops Stickers
- By phone via City Services at 3-1-1
- By electronic mail
- In person at City Locations
- Information sheets or flyers at Citizen Service Centres
- Local newspaper ads or articles
- Local radio spots
- Local television spots
- City's website
- City's Facebook and Twitter Page
- Signage
- Posters
- Presentations and Training at the Education Centre
- Displays at various functions
- Videos



Not sure where it goes?

Download the app.

GREATER SUDBURY

Let Waste Wise help you sort it out.

Available on the App Store

GET IT ON Google play

311 Service At Your Voice

Greater Sudbury



# Educational Services

## IC&I Program Set-Up





# Educational Services

## Reduce Waste

Waste Reduction  
Avoid PLASTIC BAGS.



FOOD  
Too good to waste



## Reuse Waste

Reuse Items  
and DONATE



Reuse Items  
and DONATE





# Educational Services

## Recycle & Compost Waste

### Recycling and Composting COLLECTION programs



**We collect unlimited quantities of blue box materials**, so if you need an additional blue box, please call City Services at 3-1-1.



### Recycling and Composting COLLECTION programs



**If you generate large quantities of blue box recyclables**, please consider purchasing the "Big Blue" container at a subsidized rate of \$10. Call City Services at 3-1-1 for the closest pick-up location.



### Recycling and Composting COLLECTION programs



**We collect unlimited quantities of leaf and yard trimmings.** Please make sure to use paper compostable bags and not plastic bags.



### Recycling and Composting COLLECTION programs



**We collect unlimited quantities of Green Cart organic materials**, so if you need an additional or replacement Green Cart, please call City Services at 3-1-1.





# Educational Services

## Events





# Monitoring & Inspections

SpotAudit  
Powered by NORCAT

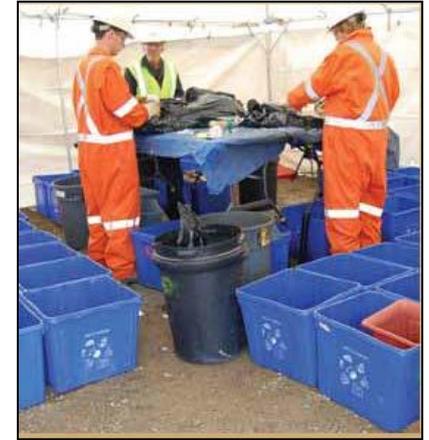


- Daily Field Inspections
- Monthly Site Pre-Inspections
- Bi-Annual Inspections
- H&S Checks



# Monitoring & Inspections

- Waste Audits
- Participation Studies
- Program Audits
- Material/Truck Audits





# Finance & Statistics

- Tracking KPIs
- Tracking Funding
- Processing Tipping & Processing Fees
- Sales Deposits



# **SYSTEM COMPONENT & STATUS**

Annual updates of system or program changes are made in this section.

# System Component & Status

## Garbage and Leaf & Yard Trimmings/Christmas Trees Co-collection System

2007 – Implementation of co-collection system	2016 – Development and implementation for a Diaper Waste Exemption special support program
2011 – Reduction of the garbage bag limit from 3 to 2 not approved	2016 – Development and implementation for a Medical Circumstances Bag Tag special support program
2012 – Leaf & Yard Trimmings banned from the garbage collection stream	2016 – Development and implementation for a Dog Waste Digester Rebate special support program
2014 – Audit report recommends reviewing changes in garbage collection and every other week collection	2016 – Development and implementation for a Home Visit program
2016 – Council approved a variety of changes in garbage collection (changes in bag limits and frequency of collection) including special support programs.	2019 – The roadside garbage collection bag limit is reduced from two to one approved container in October
2016 – The roadside garbage collection bag limit is reduced from three to two approved containers in October	2019 – Development and implementation for a Pet Waste Exemption special support program
2016 – Development and implementation for a Cloth Diaper Rebate special support program	

# System Component & Status

## Blue Box Recycling/Green Cart Organic Co-collection System

2006 – Organic collection containers selected.	2016 – Council approves the continuation of unlimited collection of blue box recyclables and green cart organics.
2006 – Expand blue box program to collect and process rigid polystyrene and plastic bags.	
2006 – Expand blue box program to collect and process cardboard cans.	
2008 - Introduced the “Big Blue” large capacity recycling container with lid.	
2009 – Implementation of co-collection system.	
2009 – Implemented green cart organic collection to all low density residential home.	
2012 and 2013 – Truckload sales of “Big Blues”	

# System Component & Status

## Facilities

2006 – Implemented single-stream blue box processing system at the Recycling Centre.

2016 – Installed drop-off garbage containers at the Azilda and Hanmer Landfills (for site users that want to avoid the disposal area).

2007 – Generate electricity from landfill gas collected at the Sudbury Landfill Site with GSU.

2017 – Completed Small Vehicle Drop-off Area at the Azilda Landfill.

2009 – Constructed the temporary organic processing pad within the waste disposal footprint of the Sudbury Landfill.

2018 – Completed Small Vehicle Drop-off Area at the Hanmer Landfill and upgraded the compost pad at the Azilda Landfill.

2010 – reviewed whether an anaerobic organic processing with gas collection would be viable. Determined to be too expensive an

2018 – Completed a feasibility study for an anaerobic organic processing with GSU.

2015 – Added another layer of landfill gas collection pipes at the Sudbury Landfill.

2019 – Complete a study on alternate organic processing systems.

2015/16 – Completed major repairs at the Recycling Centre from 2014 fire.

2019 – Completed the Construction & Demolition Material Recycling Site which is located at the Sudbury Landfill. Operations will commence in June 2021.

# System Component & Status

**Monitor the waste composition regularly to provide feedback on the effectiveness of the overall waste management system and public communication program**

2007/2008 – Conducted four waste audits.

2008 – Participated in a Provincial waste audit.

2009 – Conducted an IC&I waste audit.

2010 - Conducted a waste audit in multi-unit residential buildings.

2010 to 2013 – Conducted bi-annual residential waste audits.

2014 to 2017 – Conducted annual residential waste audits.

2018 – Conducted a roadside collection participation study (2829 households were studied, representing approximately 60,000 households with a 95% confidence level and 2% margin of error.)

# System Component & Status

## Review additional waste diversion options for high density residential (HDR) properties.

2001 – recycling services are available for a fee to registered properties

2010 – Fees for recycling services removed and replaced with garbage fees.

2010 – HDR properties on a roadside collection system are able to participate in the leaf & yard and organic collection program.

2010-2012 – Organic pilot project at a few HDR properties.

2012 – HDR properties on a centralized collection may request organic collection for a fee.

2013 – Full cost recovery on fees for garbage services approved and to be phased in over five years.

2018 – Request to provide organic collection to HDR properties on a centralized collection system not approved.

# System Component & Status

## Review additional waste diversion options for the commercial, institutional and industrial (IC&I) sectors.

<p>2010-2012 - Organic pilot project at one retirement complex, one secondary school and one high school</p>	<p>2018 – Organic collection for IC&amp;I sector approved on a limited and case by case basis. Collection fees covered by IC&amp;I sector and processing fees waived by City.</p>
<p>2011 – Municipal facilities cover their garbage and hazardous waste costs while Environmental Services covers their recycling costs.</p>	<p>2018 – Organic collection for small businesses approved for a fee – Biz Cart Program.</p>
<p>2012 – All IC&amp;I blue box recyclable materials banned from disposal.</p>	
<p>2012-2013 – Mandatory organic collection at municipal facilities. Collection and processing fees covered by Environmental Services.</p>	
<p>2013 – Organic collection at schools approved. Collection fees covered by schools and processing fees waived by City.</p>	
<p>2018 – Special event organic collection approved.</p>	

# System Component & Status

Miscellaneous Components	
Operate and promote source reduction programs	2009 – remove tire recycling fees on first four tires delivered
Operate and promote reuse initiatives	2019 – remove all tire recycling fees as required by the RPRA funding requirements.
Operate and promote the Household Hazardous Waste Program	
Operate and promote Home Composting Programs	
Operate and promote Large Furniture, Electronics and Appliance Collection Program (Bulky Items).	
Continue to lobby the federal and provincial governments to support municipalities with waste management programs with appropriate legislation, funding and fiscal policy	

# **RECYCLING BEST PRACTICES**

The following is documented for funding purposes.

# Recycling Best Practices

Goals	Objectives
To maximize diversion of municipal residential solid waste from landfill.	Divert 65% of municipal residential solid waste from landfill.
To maximize capture rates of blue box materials through existing and future programs.	Increase capture of blue box municipal solid waste to 90% or more if possible.
To maintain recycling participation in the curbside recycling program.	Maintain participation rate over 90%.
To reduce contamination in the recycling program.	Strive to keep contamination below 3%.  Continue to educate residents, monitor collection crews at the curbside and perform audits of material collected by collection crews.
To increase recycling participation in the recycling program for high density residential properties.	Make recycling services available to 100% of high density residential buildings.
Make recycling as convenient as garbage disposal for high density residential properties.	Completed in 2012.
To increase recycling participation for small businesses.	Increase participation by 1% per year.
To increase recycling participation for the IC&I sector.	Reduce recyclables from landfill sites (3% or less per truckload).
Following policies and procedures	Observation Audits are conducted every month, at least once for each dedicated collection vehicle.

# Recycling Best Practices

Monitoring & Reporting Program		
Topic	Tools	Frequency
Total waste generated (by type and by weight)	Measuring of wastes at landfill sites and residential waste transfer depots	Monthly
Residential Diversion Rate	Determined by the RPRA Datacall program	Annually
Program participation	Monitoring set-out rates	Annually
Diversion rates achieved (by type and by weight)	Formula: (Blue box materials + other diversion) ÷ Total waste generated * 100%	Annually
Waste disposed (by type and by weight)	Reconciliation of weigh scale tickets	Monthly
Customer satisfaction	Tracking calls/complaints received via the customer service system	Daily
Documentation	Review/Updating of Plan	Annually
Planning activities	Educational materials are designed according to issues identified by residents calling in, evaluation of daily run sheet reports completed by collectors, comments provided by the processing contractor, curbside monitoring inspections & waste audits	

# Recycling Best Practices

## Monitoring & Reporting Program – Collection Vehicles

Date of Audit	Area/Truck 1	Area/Truck 2	Area/Truck 3
January 10, 2019	7.70%	15.20%	
January 11, 2019			6.70%
February 8, 2019	4.90%		14.00%
February 11, 2019		19.80%	
March 21, 2019	4.50%	7.50%	9.90%
April 24, 2019	5.86%	7.05%	21.67%
December 20, 2019	12.30%		15.50%

# Strategic Goals – 2015 to 2020

Strategy 1 to 5 were reviewed and supported by the Solid Waste Advisory Panel.

Strategy 6 is a compilation of Divisional improvements developed in-house.



## Strategy 1

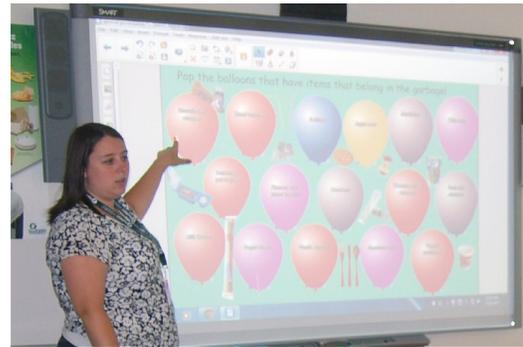
# Focus on Education





Planned Actions	Status
Develop interactive learning tools – Smart Board	Completed and on-going

Learning games and activities have been developed with Smart Board technology and students can interact with smart response remotes. This allows us to quiz the students on what they learned and have them answer anonymously through use of the remotes. The remotes connect to a responder which displays the submitted answers on the smart board. Getting this feedback instantly allows us to realize if the students have thoroughly understood a question and if not, gives us the opportunity to elaborate or re-explain the information.



Develop interactive learning tools – Hands-on	Completed and on-going
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Craft or Activity	Description	Time (min.)
<b>Grade 3, 4 and 5</b>		
<b>Newspaper Gift Bows</b>	Create bows to put on gift wrap from old newspaper and flyers	20
<b>Newspaper Wrapping Paper</b>	Create your own wrapping paper out of old newspaper. Paint it how you like or use some of our stamps created from Styrofoam.	30
<b>Redesign that package!</b>	Students are given flyers and are asked to pick out an item that they would redesign to be more sustainable or have less packaging. This activity can be done in small groups and will develop the students' creative writing, thinking and communication skills. Students will then present their ideas to the class.	40
<b>Who am I?</b>	The students will have pictures taped to their back showing compostable, recyclable, garbage and hazardous waste items. By asking yes or no questions, they must figure out exactly what item they are.	20
<b>Conduct a waste audit</b>	A garbage bag full of recyclables, hazardous waste, garbage and compostable items is given to the students. They must work together to correctly divert the items and see just how little we should actually be placing in the garbage. Divide your group in two and have them race to the finish. For younger students, a 'lighter' version of the game is available, using plastic imitations of the items.	60

<b>Grade 4 and 5</b>		
<b>Jeopardy!</b>	The classic game with a waste diversion twist! Subjects include Green Cart, Blue Box, Plastics, Garbage and Household Hazardous Waste.	45



Planned Actions	Status
Develop a 3R curriculum for school-aged children	Completed and on-going

The curriculum was developed in-house and based on the Ministry of Education’s guidelines. Schools on the City’s organic program are invited to participate. The lessons are provided at the Education Centre, located at 1805 Frobisher Street. Transportation costs from the schools to the Education Centre have been graciously donated by Canada Fibers Ltd. and Waste Management of Canada.

Subject and sub-category	Curriculum section and lesson	City Environmental Program	Time (min.)
<b>Grade 3</b>			
<p><b>Science and Technology</b> <i>Understanding Life Systems</i> – <i>Soils in the Environment</i></p> <p><i>Suggested additional activities related to this lesson:</i> - <i>Who am I?</i> - <i>Conduct a waste audit</i> (See crafts and activities section).</p>	<p>2.4 Investigate the process of composting, and explain some advantages and disadvantages of composting</p>	<p>Students are introduced to the school and residential organic composting programs in Sudbury.</p> <p>Students will learn which items are and are not acceptable in the program, how to package the organics and why composting is beneficial. They will learn what happens to their organics after they place it at the curb and how it eventually becomes compost.</p> <p>Home composting methods will also be explored. After the lesson, the students’ knowledge will be tested and key points will be reinforced via SMART quiz.</p>	60
<p><b>Science and Technology</b> <i>Understanding Earth and Space systems</i> – <i>Soil in the environment</i></p>	<p>3.2 Identify additives that might be in the soil but that cannot always be seen (e.g., pesticides, fertilizers, salt)</p>	<p>Students are introduced to natural soil composition (humus, air, water, minerals). They will discuss what can and can’t be seen in soils. A distinction will be made between natural and chemical fertilizers and pesticides. They will explore the disadvantages of chemical products and how they can be replaced by less harmful natural products.</p> <p>Students will learn about hazardous waste, how to dispose of it properly and why it is important that they do not throw it in the garbage or pour it down the drain.</p> <p>After the lesson, their knowledge will be tested and key points will be reinforced via SMART quiz.</p>	45



Planned Actions	Status
Develop a 3R curriculum for school-aged children - continued	Completed and on-going

Subject and sub-category	Curriculum section and lesson	City Environmental Program	Time (min.)
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## Grade 4

<p><b>Science and Technology</b> <i>Understanding Earth and space systems</i></p> <p><i>Suggested additional activities related to this lesson:</i></p> <ul style="list-style-type: none"> <li>- Tour of the Recycling Centre</li> <li>- Create a newspaper gift bow</li> <li>- Create newspaper gift wrap</li> <li>- Create a cereal box pencil case</li> <li>- Redesign that package</li> <li>- Conduct a waste audit</li> </ul> <p>(See crafts and activities section).</p>	<p>1.2 Analyze the impact on society and the environment of extracting and refining rocks and minerals for human use, taking different perspectives into account</p>	<p>Students are introduced to the lifecycle of a product via a case study of an aluminum can. They will learn the destination and end product of each waste stream (green cart, blue box and garbage). Emphasis is placed on the importance of recycling rather than depleting non-renewable resources.</p> <p>The lesson is concluded with tips on how to reduce, reuse and recycle. After the lesson, the students' knowledge will be tested and key points will be reinforced via SMART quiz.</p> <p>It is suggested that the teacher goes over mining and its effects before coming to education centre.</p>	<p>75</p>
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## Grade 5

<p><b>Science and Technology</b> <i>Understanding Matter and Energy</i></p> <p><i>Suggested additional activities related to this lesson:</i></p> <ul style="list-style-type: none"> <li>- Jeopardy!</li> </ul> <p>(See crafts and activities section).</p>	<p>1.2 Assess the social and environmental impact of using processes that rely on chemical changes to produce consumer products, taking different perspectives into account and make a case for maintaining the current level of use of the product or for reducing it</p>	<p>Chemical changes can be dangerous and they are a common practice today. The lesson focuses on household hazardous waste (HHW): what makes waste hazardous, different properties and symbols used to identify HHW, common examples of hazardous waste at home and school, where to dispose of HHW, the dangers of HHW products, safe disposal and unsafe disposal, environmental effects, and how some HHW is recycled.</p> <p>The lesson is concluded with tips on how to reduce hazardous waste usage and how one can help stay safe with hazardous waste at home.</p> <p>After the lesson, the students' knowledge will be tested and key points will be reinforced via SMART quiz.</p>	<p>60</p>
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Subject and sub-category	Curriculum section and lesson	City Environmental Program	Time (min.)
<b>Grade 5 (continued)</b>			
<p><b>Science and Technology</b> <i>Conservation of energy and resources</i></p> <p><i>Suggested additional activities related to this lesson:</i></p> <ul style="list-style-type: none"> <li>- Tour of the Recycling Centre</li> <li>- Create a newspaper gift bag</li> <li>- Create a newspaper gift bow</li> <li>- Create newspaper gift wrap</li> <li>- Create a cereal box pencil case</li> <li>- Redesign that package</li> <li>- Conduct a waste audit</li> <li>- Jeopardy!</li> </ul> <p><i>(See crafts and activities section).</i></p>	<p>1.1 Analyze the long-term impacts on society and the environment of human uses of energy and natural resources, and suggest ways to reduce these impacts</p> <p><i>(e.g., turning off the faucet while brushing teeth or washing and rinsing dishes conserves water; reusing or recycling products, or using fewer products, conserves natural resources and energy)</i></p>	<p>In this lesson, students will learn about the lifecycle of garbage, recyclable and compostable items, as well as the positive and/or negative environmental effects of putting items in the garbage, Blue Box or Green Cart. The lesson focuses on ‘closing the loop’, or creating a continuous cycle where items get recycled rather than ending their life in a landfill. There will be an open discussion on how to use fewer resources at home.</p> <p>After the lesson, the students’ knowledge will be tested and key points will be reinforced via SMART quiz.</p>	<p>120</p>

Planned Actions	Status
<p>Pilot a Community Door-to-Door 3R Educational Campaign</p>	<p>Completed and on-going</p>

Research suggests that one of the best ways to provide residents with meaningful information is to conduct a door to door campaign. Residents would be provided information, the information would be reviewed and the resident would have an opportunity to ask questions. Staff would also determine any barriers and seek a commitment from residents to participate in waste reduction and diversion efforts. These campaigns would then be followed up by a participation study or waste audit to determine a success rate.

A door-to-door campaign was completed in August 2015 and resulted in no significant increase in waste diversion. Staff recommended that the door to door concept be replaced with another program.

In July 2016, Council approved the necessary resources to provide educational home visits to residents that request assistance.

## Strategy 2

# The Construction and Demolition Material Recycling Site





# Overview

## The Construction and Demolition (C&D) Material Recycling Site

The dedicated C&D Material Recycling Site will receive, sort, store, and process C&D waste generated within Greater Sudbury for future use. The C&D area will be located within a buffer area of the Sudbury Landfill Site. The main objective of the C&D Area is to divert waste from landfill in order to extend the site life. The site will have an area that is flexible in design and layout, is capable of accommodating variations in C&D waste inflow, and allows the accepted C&D waste stream to be enhanced as viable market options occur.

Planned Actions	Status
Environmental Compliance Approvals	Completed

The establishment of a specific C&D area within the buffer area of the Sudbury Landfill required an amendment to the site’s Environmental Compliance Approval. The application was submitted in 2012 and the approval was received in 2015.

Construction of the Site	Completed
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Phase 1 of the project was approved by Council in 2010 during the Capital Budget process; this involves site remediation, design, and Ministry of the Environment (MOE) approvals.



Phase 2 involves the actual construction of the site, including an internal road leading to and from the site, drop-off areas, processing pads, storage areas, and construction of a fire/emergency exit for the site; this portion was approved by Council in the 2011 Capital Budget process.

Construction of the site began in 2012. This involved the removal of a pole line, clearing and grubbing the area, fencing and the commencement of an internal access road. Staff held off completing the site in the event the MOE had specific requirements. The site was completed in 2019 and will commence operation in the Spring of 2021.



Planned Actions	Status
Review expanding the current program	Completed and on-going

The City currently processes various categories (wood waste, scrap metal, concrete, brick and block) of source-separated construction and demolition waste materials.

Staff will review expanding the program to include the processing of mixed materials and the processing of additional source separated materials. The additional source separated items will include:

## Asphalt Shingles



## Non-Recyclable Glass



*includes broken window panes, mirrors, glass tiles, etc.*

## Non-Metal Fixtures



*includes toilets, sinks, granite counter tops, etc.*

## Non-Wooden Flooring



*includes carpeting, vinyl flooring, etc.*

## Strategy 3

# Increase Policies that Induce Waste Diversion





Planned Actions	Status
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Reduce the Residential Garbage Bag Limit from Three (3) to Two (2)	Completed and on-going
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In 2011, the recommendation to reduce the garbage bag limit from three to two was defeated. Staff was requested to re-introduce the motion in a few years.

In March 2016, Council approved the reduction of the garbage bag limit from three to two, effective October 2016 and from two to one, effective October 2019.

Change the Garbage Collection Frequency from Weekly to Every Other Week	To be implemented in February 2021
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Municipalities that have switched from weekly garbage collection to every other week garbage collection have experienced an increase in waste diversion and a reduction in garbage generation. Net savings associated with this change varies across municipalities.

In March 2016, Council approved to change the frequency of garbage collection from weekly to every other week, effective February 2021.

Eliminate the weekly residential landfill exemption (from 50kg to 0 kg)	Not recommended at this time
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This item was reviewed but not recommended at this time.

Strategy 4

# Solid Waste Processing and Disposal Capacity





Planned Actions	Status
Participate in the Development of the RPWCO Landfill Disposal Capacity Value Model and Input Details	Completed and on-going

Golder Associates was retained by the Regional Municipality of Halton on behalf of the the Regional Public Works Commissioners of Ontario (RPWCO) to develop a detailed model template that can be used by municipalities in Ontario that own and/or operate landfill sites. The purpose of the model is to calculate and develop site specific projections of the value of landfill disposal capacity (on the basis of dollar per tonne disposed).

The City of Greater Sudbury participated on the sub-committee that reviewed the development of the model. The model is based on the US EPA handbook on full cost accounting to assess the true cost of landfill disposal. Once completed, the model will be used to estimate the tipping fee that should be charged to cover the full costs of landfill disposal.

Update Landfill Life Projections	TBD
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This will be reviewed as part of the Solid Waste Management Plan update.

Review Options to Increase Processing Capacity for Organics	2019-2020
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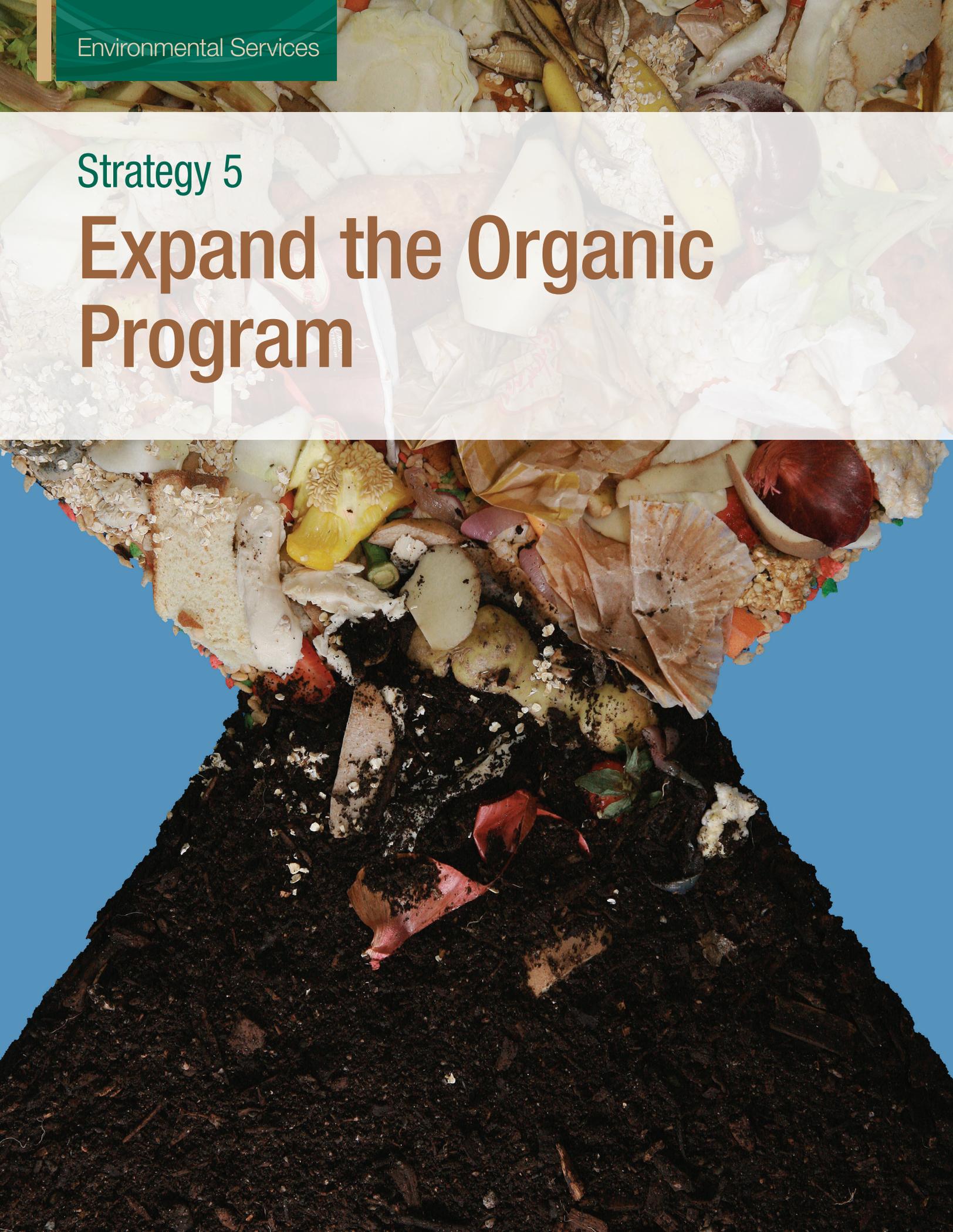
The City has adequate capacity to process organics from the residential sector but limited capacity for other sectors.

The current processing area is located within the waste disposal footprint of the Sudbury Landfill. This location is temporary and must be moved to allow the burying of garbage.

For these reasons, a review is underway to select a processing system and new location. Preliminary results should be available during the 2019/20 period.

## Strategy 5

# Expand the Organic Program





Planned Actions	Status
Organic Collection for Multi-Unit Residential Properties on a Centralized Collection System	2017 - Available for a fee and not mandatory.

Multi-unit residential properties on a centralized collection system are currently not mandated to have a source separated organic collection system. However, property owners may request the service and the service would then be provided on a cost recovery basis.

Industrial, Commercial and Institutional Organic Waste	Completed
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Council approved two organic collection programs for the Industrial, Commercial and Institutional sectors on December 12, 2017 (as part of the 2018 Budget process).

The first program would provide small non-residential generators on a residential collection route with organic collection for a fee.

The second program would provide a limited number of non-residential generators with organic collection for a fee. Council approved waiving the processing fee to encourage participation.

Special Events Organic Collection Program	Completed
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The Special Events Organic Collection program is set-up similar to the City's Special Event Recycling Program.

Special Event Organizers would submit an application and City staff would review the application. If approved, the City would arrange for the delivery and servicing of the equipment.

## Strategy 6

# Divisional Improvements





Planned Actions	Status
The Waste Wizard	Completed

The Waste Wizard is an online waste sorting tool that provides information on how to properly handle and dispose of waste items. This web-based program will be imbedded within the Division’s website section. The program will allow employees and residents to determine how to dispose or recycle various waste items. The user simply has to type in the waste material and hit the search button.

The tool will also be used by 3-1-1 operators responding to call ins from the general public.

This tool is also available on the City’s Waste Wise App.



What’s my collection day?	Completed
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Residents are able to access their personal collection day by simply entering their home address in the on-line program. This web-based program will be imbedded within the Division’s website section.

The tool will also be used by 3-1-1 operators responding to call-ins from the general public.

This tool is also available on the City’s Waste Wise App.

Custom integrated software for AVL/GPS technology systems	Phase 1 - completed for City owned vehicles Phase 2 - completed for City owned vehicles 2021 for Contractor vehicles
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Staff have been working diligently with the service provider to develop a customized software program that will provide an inventory of collection points, collection point details, a digital route sheet and a touch screen exception reporting mechanism. The system will provide near real time details to the administrative office.

This will improve customer service, reporting and routing capabilities.