

# Waste Diversion Plan



# Table of Content

---

- History
- Preferred System
- System Components & Status
- Appendix A - Landfill Diversion
- Appendix B – Sample Education Materials
- Appendix C - Annual Solid Waste Reports
- Appendix D - 2015-2020 Solid Waste Strategy



# History

---

In 2001, the former Regional Municipality of Sudbury and the lower tiered municipalities, along with two unorganized townships amalgamated as the City of Greater Sudbury.

The former Region was responsible for solid waste landfill sites and all waste diversion collection & processing programs. The lower tiered municipalities were responsible for garbage collection services.

The first two years of the 'new' City was focused primarily on the transition process and equalizing service levels.

In 2003, staff identified the need to review the overall solid waste system and Council supported the review. A Waste Optimization Study was commissioned later in the year. The objective of the study was to identify methods or programs in which to increase waste diversion from 15% to 65% while simultaneously reducing greenhouse gas emissions associated with solid waste programs (i.e. co-collection or dual purpose collection vehicles).

A Technical Steering Committee (TSC) was formed to review study phases and to make recommendations to Council. The TSC included two Councillors, the Manager of Waste Management and members of the public.

In 2004, the TSC narrowed the study approach to the residential waste stream and developed a "Long List" of 13 alternative waste collection and processing management systems. The long list was screened down to a more manageable "Short List". The "Short List" consisted of four systems which were considered the most suitable long term alternatives due to technical, economic/financial, social and/or environmental considerations.

The Study purpose, goals, the existing system and the four short listed systems were presented at several public input meetings throughout Greater Sudbury in October 2004.

The 'Short List' was increased to five systems by the TSC following the review of the 2004 public input meetings.

A detailed evaluation of the five systems was conducted, reviewed by the TSC and additional public meetings were held in early 2005.

The TSC reviewed the public input comments and approved the preferred system.

Staff presented the preferred system to Council in February 2005. The preferred system was adopted in principle on February 23<sup>rd</sup>, 2005. Staff was requested to report back with detailed financial information as programs developed.

# Preferred System

## ■ 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.



# Preferred System - continued

## ■ 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



## ■ Processing Organics

### ◆ Establish windrow organic pad within the Sudbury Landfill Site

#### ◆ Cost to construct organic pad to be funded from Solid Waste Reserves

#### ◆ Grinding equipment to be included in operating contract

#### ◆ Turning equipment – use the existing landfill loader

### ◆ Review “Greener” processing systems (i.e. anaerobic digester) at a later date



## ■ Continue to operate source reduction programs, reuse initiatives, the Household Hazardous Waste Program, Home Composting Programs and the Bulky (Furniture & Appliances) Item Collection Service



## Preferred System - continued

### ■ Processing/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.



*« Adopt a new collection system that maximizes the use of existing or upgraded processing facilities».*





# System Components & Status

Recommendation	Status
<p>New Garbage and Leaf &amp; Yard Trimmings/Christmas Trees Co-collection System</p>	<p>Co-collection system implemented in 2007.</p> <p>In 2011, Council did not approve the reduction of the garbage bag limit from 3 to 2 units. The matter will be revisited in a few years.</p> <p>In 2011, Council approved the requirement for residents to divert all leaf &amp; yard trimmings from garbage collection services. The new requirement commenced on March 1<sup>st</sup>, 2012.</p> <p>In 2014, Council via the Audit Report directed staff to again review a decrease in the garbage bag limit from 3 to 2 bags and to review bi-weekly garbage collection. This was also a recommendation of the Solid Waste Advisory Panel.</p> <p>In 2015, Staff presented the 2015-2020 Solid Waste Strategy to the Operation's Committee for information only. A copy of this document is provided in Appendix D.</p> <p>In March 2016, Council approved the following change to the waste collection policy: October 2016 – reduction of the garbage limit from 3 to 2 bags.</p> <p>October 2019 - reduction of the garbage limit from 2 to 1 bag.</p> <p>October 2021 – a switch from the weekly co-collection of garbage and leaf &amp; yard trimmings to every other week collection.</p>
<p>Selection of Curbside Household Organic Containers</p>	<p>Conducted and selected by the Technical Steering Committee in April 2006.</p>

## System Components & Status - continued

Recommendation	Status
<p>New Blue Box Recyclables and Organics Co-collection System</p>	<p>Implemented single-stream blue box recycling collection in 2006.</p> <p>In 2008, introduced the 'Big Blue' residential curbside recycling container. Containers are sold for \$17. These containers are ideal for residents that produce 3 to 4 blue boxes or more per week.</p> <p>Implemented the 'Green Cart' organics program to low density residential homes mid 2009.</p> <p>In 2011, Council approved two truckload sales of Big Blues (large capacity curbside residential recycling containers). One sale will be held in 2012 and another in 2013.</p> <p>In March 2016, Council approved to continue co-collecting unlimited amounts of blue box recyclables and green cart organics on a weekly basis.</p>
<p>Upgraded Facilities</p>	<p>The Recycling Centre's processing equipment and portions of the building were damaged by Fire in June 2014. Repairs are expected to be completed in 2015.</p> <p>Constructed the outdoor organic pad at the Sudbury Landfill Site in June 2009. Upgrades/expansion conducted in 2011.</p> <p>Review 'Greener' Composting Processes – RFP posted and reviewed in 2010. The cost to implement an anaerobic digestion unit for organic waste and to connect this unit to the existing landfill gas engine to produce electricity was determined to be too costly.</p>



## System Components & Status - continued

Recommendation	Status
Upgraded Facilities - continued	<p>Implemented a landfill tarp system at the Sudbury Landfill Site in 2010. The tarp is used in conjunction with soil to cover waste at the end of each operational day.</p> <p>2013 - The tarp has proved to be problematic. Metal landfill plates will replace the tarp system.</p> <p>2015 – Metal plates continue to be used but have been used in conjunction with conveyor rubber mats.</p>
Continue to operate and promote: Source Reduction Programs; Reuse Initiatives; Household Hazardous Waste Disposal Services; Home Composting Programs and the Bulky Item Collection Service	<p>Ongoing.</p> <p>Source Water Protection Policy - The City will be reviewing and evaluating the Household Hazardous Waste Program. Any improvements deemed necessary must be in place within three years that the policy is approved.</p> <p>2015 – The Household Hazardous Waste Program was reviewed and no additional improvements were recommended under the Source Water Protection Policy.</p>
Generate Electricity with Landfill Gas	<p>Launched in September 2007.</p> <p>An additional layer of landfill gas collection pipes was installed in 2015.</p>
Continue to lobby the federal and provincial governments to support municipalities with waste management programs with appropriate legislation, funding and fiscal policy	<p>The Director sits on various Waste Management Committees. Submissions are provided as part of these organizations or directly to the MOE as required. In 2015, the Regional Public Work's Committee submitted comments regarding Bill 151 – Waste Free Ontario Act.</p>

## System Components & Status - continued

Recommendation	Status
<p>Continue to lobby the federal and provincial governments to support municipalities with waste management programs with appropriate legislation, funding and fiscal policy - continued</p>	<p>The Director submits comments on the MOE EBR system as required.</p> <p>The Tire Recycling budget was reduced from \$404,000 per year to \$10,000 per year in 2011. This is a direct result of the Ontario Tire Stewardship (OTS) Program (A Waste Diversion Ontario initiative).</p> <p>On February 1, 2011, the City commenced a separate recycling collection for Televisions and Computers. This is a direct result of funding from the Ontario Electronic Stewardship (OES) Program (A Waste Diversion Ontario initiative).</p> <p>Continue to participate in funding improvements for Municipal Special Hazardous Waste materials.</p>
<p>Monitor the waste composition regularly to provide feedback on the effectiveness of the overall waste management system and public communication program</p>	<p>Conducted 4 waste audits during the 2007/2008 period .</p> <p>Participated in the Provincial Waste Audit - Spring/Summer 2008.</p> <p>IC&amp;I Spring and Fall waste audits completed in 2009.</p> <p>Conducted an IC&amp;I Waste Diversion Strategy in 2009.</p> <p>Detailed waste audit conducted in multi-unit residential buildings in 2010.</p> <p>2010 - Spring and Fall residential waste audits are to be completed every year and summary details posted to website.</p> <p>2014 – Residential audits reduced to once per year.</p> <p>Ongoing public communication Plan.</p>

## System Components & Status - continued

Recommendation	Status
<p>Review additional waste diversion options for high density residential (HDR) properties.</p>	<p>Recycling services are provided to registered properties.</p> <p>2010-2012 – a few HDR's on a central collection system are participating in an organic cart collection pilot program.</p> <p>The program for the participating properties on the pilot program are now permanent. Any new properties wishing to join the City's organic program can do so by request and on a cost recovery basis.</p> <p>In 2010, Council approved additional waste diversion programs for HDR's on a curbside collection system. These HDR's are now on the City's leaf &amp; yard trimmings and Green Cart Organic's program.</p> <p>In 2013, Council Approved full cost recovery for garbage collection for HDR's. This will be phased in over five years, commencing in 2014.</p> <p>The provision of organic collection will be reviewed in 2017.</p>
<p>Review additional waste diversion options for multi-type properties.</p>	<p>In 2009, Council approved the provision of waste collection and waste diversion programs for the residential units of multi-type properties.</p> <p>In 2013, Council Approved full cost recovery for garbage collection for HDR's. This will be phased in over five years, commencing in 2014.</p>
<p>Review additional waste diversion options for the commercial, institutional and industrial sectors</p>	<p>The 'Biz Box' curbside recycling program is available to the IC&amp;I sector for a small annual fee.</p>

## System Components & Status - continued

Recommendation	Status
Review additional waste diversion options for the commercial, institutional and industrial sectors - continued	<p>In June 2011, Downtown Sudbury approved the payment of a twice weekly evening collection of recyclable materials for the Central Business District. The program commenced in November 2011.</p> <p>In 2011, Council approved expanding the current corrugated cardboard landfill disposal restriction to all blue box recyclables. The new requirement will become effective November 5, 2012.</p>
<p>Organic collection - Residential Retirement Complex</p> <p>Organic collection - Schools</p> <p>Organic collection - Special Events</p>	<p>2010-2013 – a retirement complex is participating in the organic cart collection pilot program. A report was taken to Council in 2013 that indicated that any organic expansions would be reviewed under the 5 Year Solid Waste Strategic Plan.</p> <p>2010-2012 – one elementary and one high school are participating in the organic cart collection pilot program.</p> <p>Expansion of the program to schools was approved in 2012 for implementation in 2013.</p> <p>In 2014, eight schools, Cambrian College and Laurentian University were participating in the organics program.</p> <p>2011 – Two pilot projects were undertaken and a report was taken to Council in 2013 that indicated that any organic expansions would be reviewed under the 5 Year Solid Waste Strategic Plan.</p>

## System Components & Status - continued

Recommendation	Status
All waste streams - Municipal Facilities	<p>In 2011, Council approved enhanced waste diversion efforts and programs at municipal facilities. Recycling and diversion programs to be administered and financed by the Environmental Services Division, with the exception of hazardous waste. Municipal facilities will continue to fund their own garbage collection and disposal costs, but under the terms and conditions of the Environmental Services contracts.</p> <p>Organic collection at municipal facilities will commence in April 2012 and the majority of facilities should be fully implemented in 2013.</p>
Review additional waste diversion options for all sectors	<p>Expanded the Blue Box Recycling Program to include polystyrene foam and plastic bags in 2006 and cardboard cans in 2007.</p> <p>Removal of tipping fees on 'other' wood waste in 2008.</p> <p>Removal of tire recycling fee on the first four tires without rims in 2009.</p> <p>The 5 Year Solid Waste Strategic Plan was not presented in 2015.</p>
Construction & Demolition Material Recycling Site	<p>Construction &amp; Demolition Material Recycling Site:</p> <ol style="list-style-type: none"> <li>1) Council approved funding for the site approvals and detailed site designs in 2010.</li> <li>2) Pilot project to sort mixed construction &amp; demolition waste was conducted in 2010.</li> <li>3) Council approved for the construction of the site as part of the 2011 Capital Budget process.</li> <li>4) Construction of the site commenced in 2012 and should be completed once the site approvals have been finalized.</li> </ol>

## System Components & Status - continued

Recommendation	Status
Construction & Demolition Material Recycling Site - continued	<p>5) Site operation will be reviewed as part of the 5 Year Solid Waste Strategic Plan.</p> <p>6) A landfill capacity report will be commissioned once the C&amp;D Material Recycling Site has been in operation for at least one year.</p>

# Recycling Best Practices – Goals & Objectives

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. Attempt to increase amount by 4% per year.
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 (i.e. apartments, trailer parks, townhouses).  Make recycling as convenient as garbage disposal for high density residential properties.	Make recycling services available to 100% of high density residential buildings.  Complete 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).  The ban on IC&I corrugated cardboard was expanded to all blue box recyclables in November 2012.



# Recycling Best Practices – Monitoring & Reporting Program

Topic	Tools	Frequency
Total waste generated (by type and by weight)	<p>Measuring of wastes and recyclables at landfill sites</p> <p>Measuring of wastes and recyclables at residential waste transfer depots</p>	<p>Each load – information is then populated monthly in the WasteWorks Software</p> <p>Each container – weight is estimated based on quantity in each container and this information is updated monthly.</p>
Residential Diversion Rate	Determined by the WDO Datacall program	Annually
Program participation	Monitoring set-out rates	Annual - Waste Audit
Diversion rates achieved (by type and by weight)	Formula: (Blue box materials + other diversion) ÷ Total waste generated * 100%	Annual - Waste Audit
Waste disposed (by type and by weight)	Reconciliation of weigh scale tickets	Monthly
Customer satisfaction	Tracking calls/complaints received to the municipal office	Daily
Review/Updating of Plan	The Waste Diversion (Recycling) Plan is reviewed and updated annually at a minimum.	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	Daily/weekly

# Recycling Best Practices – Monitoring & Reporting Program

Topic	Tools/Schedule	
Curbside Monitoring	Jan 14, 2015 – 7 streets, approx. 10 hhlds Feb 19, 2015 – 3 streets, approx. 10 hhlds Mar 4, 2015 – 4 streets, approx. 10 hhlds Apr 16, 2015 – 3 streets, approx. 10 hhlds May 22, 2015 – 3 streets, approx. 9 hhlds July 28, 2015 – 2 streets, approx. 11 hhlds	Aug 19, 2015 – 1 street, approx. 7 hhlds Sept 3, 2015 – 2 streets, approx. 10 hhlds Oct 15, 2015 – 4 streets, approx. 9 hhlds Nov 10, 2015 – 1 street, approx. 6 hhlds Dec 8, 2015 - 2 streets, approx. 8 hhlds
CBD Audit	Jan 7, 2015 – CBD Inspection of laneways Apr 14, 2015 – CBD Apr 17, 2015 – CBD	Nov 17, 2015 – CBD Nov 20, 2015 - CBD
Monitoring at the Recycling Centre	Jan 20, 2015 Feb 10, 2015 Mar 19, 2015 Apr 8, 2015 July 12, 2015 July 29, 2015 Aug 11, 2015 Aug 26, 2015 Sept 10, 2015 Oct 6, 2015 Nov 3, 2015 Dec 15, 2015	

# Recycling Best Practices – Promotion & Educational Program

---

The City of Greater Sudbury's 3R's Promotional and Educational Program has been in place for many years and has included the following methods:

- Letters, flyers or newsletters to residents
- In person at the resident's home
- 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
- Outdoor signage
- Presentations
- Displays at various functions
- Videos

The program is intended to provide residents with the necessary information to divert/recycle waste. The information must be simple and repeated on a regular basis. The program is also intended to increase diversion/recycling, but also to decrease contamination.

The City is also monitoring that the collection crews are leaving behind non-recyclables in the blue box (contamination). The goal is to not confuse the resident by collecting non-recyclables.

Ultimately, an effective program should not only explain what can be diverted/recycled, but how and why.

Since budgets and resources are limited, understanding what method of communication should be used was a clear motivator to conducting a survey with local residents. This survey was conducted in 2011 and the survey summary is provided in Figure A.

Based on the survey results, communication with our local residents has been modified and staff are concentrating on the top four items as detailed below:

# Recycling Best Practices – Promotion & Educational Program - continued

---

## 1 - Communicating directly with residents

- The Communication Section developed a newsletter and included waste diversion, recycling and waste related topics. The newsletter was delivered to all households.
- Residents ordering blue boxes are asked whether they would like to receive an information package. These packages are mailed directly to their home and will include a brochure on what's recyclable, a fridge magnet, recycling tips and other miscellaneous waste diversion information.
- Information is also mailed directly to residents based on daily collection route information. These letters and information sheets typically address specific issues.
- An Education Centre room was constructed in 2013. Certain elements of the room were furnished in 2013 and the room will be completed in 2014. The Education Centre will be used to educate school children on recycling and waste diversion programs. The Education Centre is conveniently located adjacent to the City's Recycling Centre.



## 2 - City's Website

- The Garbage & Recycling section of the City's website is continually updated in order to provide residents with the most up to date information. The website is a popular tool for residents to research topics, to download information or to determine how to contact us for further details.
- A video of the City's Recycling Centre Processing System was developed in house and is posted on the City's website. The video demonstrates the collection of blue box recyclables and what happens to these recyclable items once they arrive at the City's Recycling Centre. The City has also produced a video on the leaf & yard program, the green cart organics program and the household hazardous waste program.
- The review, monitoring and improvement program for the high density residential program is also posted on the City's website. This section of the website is a useful tool for property superintendents.

# Recycling Best Practices – Promotion & Educational Program - continued

---

## 3 - Electronic Mail

- The majority of promotional and educational materials will provide the division's e-mail address – [wastemanagement@greatersudbury.ca](mailto:wastemanagement@greatersudbury.ca) and we encourage residents to contact us in this manner.

## 4 - Phone

- Local residents are aware that they may contact the City by calling 3-1-1. The City's call centre is staffed by a pool of generalists. The call centre operators will provide basic information to residents calling the City. More detailed questions or requests are logged in a customer service system that will re-route the request (case) to the appropriate department. The Call Centre Supervisor is always notified when promotional blitzes are advertised.

## 5 - Local Newspapers

- Staff will continue to place newspaper ads under the CNA-OCNA In-Kind Advertising Allocation.

## 6 - Other Methods

- For the time being, the other low ranking methods will either not be used or be used rarely.

---

Local Newspaper Ads	Local Newspaper Inserts such as a flyer or newsletter	Letters or flyers sent by mail	Local Radio Stations	Local Television Channels	City's Website	E-mail	Facebook or Twitter	Outdoor signage such as billboards, transit benches or shelters	Information Sheets or Brochures at Citizen Service Centres	Other - Phone	Other	Details of "other" Specified
3.70%	1.23%	48.15%	3.70%	2.47%	18.52%	11.11%	0.00%	0.00%	0.00%	8.64%	2.47%	0.00%