CIF 517.4

Multi-residential Recycling: Implementing Best Practices *City of Greater Sudbury*





Final Project Report, August 20, 2013

City of Greater Sudbury

CIF 517.4

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Executive summary

This is the final report of a project implemented by the City of Greater Sudbury between June of 2010 and April of 2012. The project goal was to increase recycling rates by implementing best practices in the municipal multi-residential (MR) recycling program as well as twin all garbage and recycling containers at MR properties. Waste Diversion Ontario - Continuous Improvement Fund (WDO – CIF) provided financial and technical assistance.

The City of Greater Sudbury (CGS) provides blue box recycling collection services to all low density residential households (6 units or less) and to approximately 99% of all high density residential households (7 units or more) by agreement only. The number of MR buildings provided with municipal recycling service increased from 401 to 439 during this project.

The best practices that were implemented during this project included: creating a database of multi-residential properties, evaluating the recycling performance of individual buildings and estimating the overall program recycling rate, increasing the number of recycling containers at buildings and distributing new promotion and education (P&E) materials to residential and building staff. Additional work included in this project was: revising the City's MR property waste management agreements to offer mandatory, nofee recycling collection alongside low-cost garbage service rates, delivering MURFE containers to each MR unit, developing a property manager's recycling guide and updating the City's website to include MR properties and the MR recycling project.

The average recycling rate at buildings was at 54 kg per unit and the total amount recycled for all buildings was 1734 tonnes per year (2012). In 2009 MR properties recycled 1248 tonnes (pre-project implementation) and in 2012 CGS's MR properties recycled 1734 tonnes (post-project implementation). The tonnage numbers are based on actual weight data from the tonnage from the waste collection trucks (they are weighed before tipping at the recycling centre). An additional 500 tonnes are recycled annually at MR properties due to the implementation of this project which represents a 40% increase.

At MR properties in the CGS there are three types of containers for recycling: blue boxes for curbside collection, otto carts and front end recyclers. The CGS twinned garbage and recycling collection at MR properties during this project so that properties had containerized (front end or otto carts) garbage and recycling collection or curbside garbage and recycling collection. Front end recyclers were the preferred recycling container and were placed at all properties that had front end garbage bins as well as the space needed for a front end recycler. As well, the number of

otto carts at MR properties was increased to meet or exceed the best practices minimum.

This project is part of a larger overall goal to increase the service-levels offered at MR properties in the CGS.

The cost to complete the project was \$27,678. The City of Greater Sudbury was approved up to \$36,425 funding from the Continuous Improvement Fund.

To learn more about the City of Greater Sudbury's multi-residential recycling program please contact the CGS at (705) 674-4455 ext. 4406 or by email at wastemanagement@greatersudbury.ca.

Introduction

The City of Greater Sudbury has a population of just over 160,000 people and is an amalgamation of the former Regional Municipality of Sudbury (Sudbury, Capreol, Nickel Centre, Onaping Falls, Rayside-Balfour, Valley East and Walden) as well as many unincorporated townships (Fraleck, Parkin, Aylmer, Mackelcan, Rathburn, Scadding, Dryden, Cleland and Dill). Sudbury is a bilingual city where close to 40% of the population identify themselves as bilingual. The CGS provides curbside collection to approximately 55,000 households which includes just over 14,000 multi-residential units. Following Council's approval to enhance service-levels to (MR) properties, the CGS decided to also increase recycling capacity which in turn should increase recycling participation at each of the City's 439 MR properties to tie in the CIF project. To start the MR recycling project, the CGS revised and sent out new waste management agreements to all of the City's MR properties. These revised agreements switched the collection fee from recycling to garbage and required City run recycling at each MR property. Previously, the MR property could have had a private recycling service with City run garbage but this option was abused and many properties had City run garbage but did not have any recycling. To ensure there was recycling at each MR property, garbage and recycling were twinned with the new agreements. As a result of the fee change, MR properties are now able to receive no-fee recycling collection services. MR properties were visited by a City staff member who conducted the WDO-CIF site inspections to establish a baseline database. As well, MR properties were inspected by a City waste contractor to assess the recycling capacity potential increase which was one of the CGS's main goals. Another focus of this project was to twin all recycling and garbage containers at MR properties so that MR properties were either entirely containerized i.e. recycling in front end bins or otto carts and garbage in front end bins or the properties were entirely curbside. To clarify, a property that had a front end garbage bin would now need to have

a front end recycler or otto carts as curbside recycling collection with front end garbage bin would no longer be permitted in the revised agreements. Making recycling as convenient as garbage disposal was a key element of the project. Those MR properties that had enough space were provided with a 6 cubic yard front end recycler and those that did not have enough space for a front end recycling bin were given more otto carts. As well, some MR properties remained curbside. All recycling containers were provided to MR properties at no cost to the property with each MR property meeting or exceeding the best practices minimum requirement of 50 litres per unit. The CGS also modified the WDO-CIF P&E materials. The CGS chose the Multi-Unit Recycler for Everyone (MURFE) container to hand out to each MR unit. Kits for each MR unit were prepared that included: a MURFE container, a furniture and appliance information sheet, an MR information sheet (curbside or containerized), a recycling brochure and a magnet. During the MURFE handout, a poster was hung in either the lobby of the building or at the entrance(s) of the building, advertising the MR recycling program and the MURFE kits. Property owners and/or superintendents were also mailed a superintendent manual that outlined their roles and responsibilities in this program, offered helpful tips as well as additional resources that are at their disposal. All otto carts as well as 6 cubic yard front end recyclers had bin labels stickered on them to advertise the materials that the CGS accepts in the blue box recycling program.

Background: multi-residential recycling program overview

There are 14,077 multi-residential households within the CGS, post-project implementation as shown in Table 3.1. Nineteen percent of all households in the CGS are multi-residential as shown in Table 3.1, also post-project implementation.

All MR properties that have a waste management agreement with the CGS receive recycling collection once per week. The CGS operates a single stream system for recycling accepting: OCC, boxboard, glass containers, aluminum cans, foil, plates and trays, food and beverage steel cans, cardboard cans, empty and dry paint cans, empty aerosol cans, plastic containers numbered 1, 2, 4, 5 and 6, styrofoam packaging, film plastic and milk and juice containers/cartons. The majority of MR properties recycle in the CGS and do so through a waste management agreement with the City as shown in Tables 3.2 and 3.3. There was no major increase in the number of MR properties recycling before and after the project (Table 3.2) as many MR properties already had a recycling program in place. As a result of so many MR properties already recycling in the CGS, the main objectives for the CGS's MR recycling project were to increase the capacity at each MR property and to twin the containers for recycling and garbage. As previously noted, all MR properties that have a waste management agreement with the

City must recycle however; there is no fee for recycling collection with this revised agreement. As well, the CGS offers a low-cost rate for garbage collection with the City's waste management agreements. One revision of the City's waste management agreements is that MR properties will not pay a fee for recycling collection but will for garbage collection. This new initiative had the expected outcome of increasing the City's diversion and recycling capture rates at MR properties. Placing the fee on garbage also encourages property owners and superintendents to promote and support recycling efforts which will minimize the amount of garbage produced and the need for additional, costly garbage servicing (outside of the once per week allotment in the CGS agreement). In the CGS, MR properties can have either curbside collection, otto carts or a front end recycler for blue box recycling. As one of the main initiatives for the CGS was to increase blue box recycling capacity at MR properties, all MR properties that could accommodate a 6 cubic yard front end recycler and already had a front end garbage bin, had the 6 cubic yard front end recycler delivered at no cost. MR properties that could not accommodate the large recycling bin were given more otto carts at no cost (otto carts were re-used from the properties that were given a 6 cubic yard front end recycler). MR properties that continued to receive curbside collection continue to receive blue boxes at no cost as there is no fee for blue boxes in the CGS for residents. All changes to the recycling containers were discussed with the property owners ahead of delivery. MR properties that have between 7 and 50 units are allotted one 6 cubic yard front end recycler. Best practises were followed and all MR properties were given a minimum recycling capacity of 50 litres per unit. The CGS's MR properties that have a 6 cubic yard front end recycler are given a minimum of 92 L/unit. The number of otto carts provided to a property is calculated based on the best practices minimum as well as the recycling history of the building. If a property has been known to exceed the best practices minimum, more otto carts are allotted to the property. The trucks that collect from MR properties are not on designated MR routes. MR properties that have curbside collection have their recycling collected alongside the regular residential route while MR properties that have front end recyclers or otto carts are collected alongside the commercial route. In 2012, the CGS collected an estimated 1734 tonnes of recyclables from MR properties. Before the project was implemented, 401 buildings, 13,275 units were provided with recycling collection. The majority of MR properties have always recycled with the CGS. A handful more MR properties recycle with the CGS due to this project but there was not a significant increase in the number of MR properties that recycle. There was however a significant increase in the recycling capacity at MR properties. As well, the majority of MR properties in the CGS now have their garbage and recycling containers twinned which will increase recycling ease and participation by MR tenants.

As discussed above, the CGS has put into practice some best practice elements to increase recycling rates including: having no fee recycling collection for MR properties with a City waste management agreement, necessitating a Recycling & Waste Coordinator contact for each MR property with a City agreement, providing the minimum 50 litres per unit recycling capacity, labelling all otto cart's and front end recycler bins with a sticker that shows pictures of what's recyclable, including MR properties on the collector run sheets so that issues are noted and providing weekly collection with the City agreement for recycling.

Table 3.1: Number of households in municipality (December, 2011)

	Households	Percent
Curbside (6 units or less)	59,297	81%
Multi-res	14,077	19%
Total	73,374	100%

Table 3.2: Multi-residential recycling before and after project (December, 2011)

	Before project	*After project	% change
Buildings with recycling	401	439	9%
Units with recycling	13,275	14,077	6%

^{*}There were some new MR builds as well over the length of the project so new buildings were added to the after project count.

The project scope

The project scope included five main phases:

- Phase 1: Develop and maintain a database of buildings
- Phase 2: Benchmark recycling performance
- Phase 3: Send out revised MR agreements
- Phase 4: Increase recycling container capacity
- Phase 5: Provide promotion & education materials

Each of the phases is discussed in the following sections.

Phase 1: Develop and maintain a database of buildings

Creating and maintaining a database of all multi-residential properties is an important step towards implementing best practices. To obtain the list of multi-residential properties, there are a number of potential sources of data, including:

- Municipal departments such as planning, taxation, or technology services may be able to identify properties and provide basic information (addresses, owners, and number of units, etc.)
- Property management or rental associations may have listings of their members' buildings and contact information for owners and property managers.

Sources & collection methodology

The City of Greater Sudbury obtained data through a variety of means. The MR properties that had a City waste management agreement were called to ensure all contact details were up-to-date and to inform them of the MR recycling project. The CGS also used the City's taxation and GIS programs, as well as the Municipal Property Assessment Corporation's (MPAC) program to collect all data necessary for the MR recycling project. GIS, Tax and MPAC allowed the CGS to gather data on MR's that did not have a City waste management agreement. Where any data issues arose at a MR property, the various data sources listed above could be used to verify the details and ensure reliability and completeness.

While some preliminary data can be collected by the methods discussed above, in-person site visits to each building were completed to collect

detailed information such as how well the recycling program is currently working, building characteristics that may create recycling challenges or opportunities (e.g. room for recycling bins), contact information for the onsite representative (e.g. superintendent) and the role that the on-site staff play in managing the building's recycling program.

The City of Greater Sudbury's site visits were conducted by one staff member that was hired on to conduct the WDO-CIF site visits and track and compile the data. This individual was given a spreadsheet that listed all of the City's MR properties and included all property and waste management details. When visiting each site, this individual verified or updated the spreadsheet with new information, took photos of the property including garbage and recycling options found at the property, as well as filled out the multi-res site visit form as shown in Appendix A. At the end of each day, this individual came back to the office and updated the spreadsheet and the property photo log. The City of Greater Sudbury encompasses a very large geographic region so it was time consuming to conduct visits at each property. This individual was trained on the manner in which site visits were to be conducted and how data was to be inputted in order to ensure consistency between MR properties.

Database and completeness of data

Initially, the CGS used an excel database to house the data collected from site visits. As well, e-copies of the site visit forms and all pictures taken during site visits were stored in MR property e-folders on the City's hard drive. The CGS had the MR Database loaded onto their system during the implementation of the MR recycling project. The MR database is more comprehensive than the original excel. All of the CGS's MR properties are now housed on the MR Database. Existing files need to be transferred over to the MR Database from the old MR property e-folders i.e. site pictures and site inspection forms. Technical concerns with the database in regards to its functionality are still being addressed. Please refer to Appendix B for a screen capture of the CGS's MR Database and Table 4.1 for the database summary.

Table 4.1: Database summary

Buildings	Total in municipality ¹	Recycling provided by municipality	Site visits completed ²	Data updated ²
Number of buildings	439	439	439	439
% of all buildings	100%	100%	100%	100%

Notes

Data maintenance

After the initial investment to create an up-to-data database it has been important to protect this investment by maintaining the database and ensuring a process of keeping it up-to-date.

As noted above, the CGS initially kept all MR property data in an excel spreadsheet. After the initial WDO-CIF investigations were completed, the CGS had MR property data moved over to the MR Database. All City staff members who deal with MR properties have participated in the webinar training sessions provided by WDO-CIF. One CGS staff member will be dedicated to updating the MR database. This will ensure the CGS's records are up-to-date for all staff members who access the database as well as all MR property owners who contact the City.

Phase 2: Benchmarking recycling performance

A key step in implementing program improvements is to benchmark current performance so that future recycling targets can be established and program improvements can be tangibly measured as you move towards meeting these desired targets.

Evaluating performance is a quantitative assessment that measures the following:

- 1) How much each building is recycling (kg/unit), and
- 2) How much is being recycled by all the buildings collectively.

Performance indicators such as container fullness and contamination were monitored during site visits. Performance data completed during site visits

¹ Total number of buildings of seven or more residential units.

is an estimate only as it is not based on precise weights. However if done consistently research suggests that performance data has been found to be within 10-15% accuracy of actual weights. Obtaining this information from each building was instructive both for flagging low performing buildings and for highlighting top performers.

Procedure for estimating recycling rates

A City staff member that was hired on to conduct the site visits and estimate the recycling rates was trained appropriately by the CGS staff. This was done to ensure consistency among all MR property inspections. The trained individual inspected all otto carts and front end recyclers, assessing the materials inside, the fullness of the bin(s), the accessibility of the recycling area and any notable issues etc. as shown in Appendix A. The recycling rates were estimated by determining the fullness of the recycling bin (front end or otto cart) on the day of the inspection, determining the frequency of recycling collection as well as the recycling collection day (if the inspection was done a few days in advance of the collection day and not the day before collection than this was factored in to the fullness of the container). MR properties that received curbside recycling collection could not have their recycling rates estimated.

Recycling rate estimates

The CIF-WDO site inspections allowed the CGS to estimate the recycling rates at all MR properties. These inspections allowed the CGS to develop baseline data on MR property recycling. Table 4.2 shows the estimated rate of recycling in MR properties in kilograms per unit per year. The average recycling rate for all buildings was 54 kg per unit per year. These audits were completed in the fall of 2010 and are estimates based on visual inspections of the MR properties' recycling.

| 1400 | Kg/unit/yr | 1200 | Average = 54 | | 1000 | 400 | 200 | 0 | Buildings | Buildings

Table 4.2: Building recycling rates, December 2010

Post-implementation visual inspections were not completed as part of the CGS MR recycling project. Random visual site inspections will be completed when staff is available.

Barriers to Recycling

Barriers to recycling were evaluated based on the WDO-CIF site inspection form (Appendix A). Eight factors for recycling barrier evaluation were investigated: OCC, contamination, accessibility, loose materials, overflowing carts, area clean, area well lit and labels & signage. These factors were rated on a scale of 1 to 3, with a rating of 1 equalling a factor that needed attention and a rating of 3 equalling a factor that demonstrated excellence. There were no buildings that displayed high standards in recycling found during the site inspections as the majority of the CGS's MR properties were rated a 2 on the barrier evaluation scale, Table 4.3 for a summary of the CGS's barriers to recycling noted during site inspections.

A major barrier to recycling found at MR properties in the CGS was the lack of properly labelled recycling bins and/or recycling carts. The few MR properties that did have labelled recycling containers were using labels that explained the 5 stream recycling process the CGS use to employ. To resolve this issue, after all MR property inspections were completed, each front end recycler and each otto cart were labelled with a sticker, that explained through text and images, which materials were recyclable in the CGS's single

stream process. Other major barriers to recycling found at MR properties in the CGS were: contamination, the management of OCC, loose materials, containers overflowing and the cleanliness of the area. The P&E materials delivered to each unit will address the issues of contamination and recyclable material management and will explain how and what can be recycled in the CGS. The P&E materials will also give residents, City contact information for any questions or inquiries they may have. As the City is working with the property owners to increase recycling capacity and to promote recycling at MR properties, the issues of overflowing containers and area cleanliness will be addressed and cooperatively resolved. All MR properties were visited but those that received curbside collection could not be inspected as per the WDO-CIF site inspection form as their recycling rate could not be evaluated.

There were a number of property owners and superintendents that were not happy with the fact that they now had to pay for garbage collection when they did not have to in the past. Some property owners and superintendents were responsive to the MR recycling program and were helpful in allowing the CGS staff to deliver the MURFE kits that included the P&E materials.

Table 4.3: Barriers to recycling noted at site visits completed at 439 buildings

Barrier to increased recycling	Require corrective action	% of total	Set high standard 'model building'	% of total
OCC managed well	31	7%	0	0%
Contamination	50	11%	0	0%
Access to recycling	10	2%	0	0%
Loose materials noted	25	6%	0	0%
Containers overflowing	15	3%	0	0%
Cleanliness of area	41	9%	0	0%
Area well lighted	3	0.7%	0	0%
Well labelled & signed	183	41%	0	0%
*Total	439		0	

^{*}MR properties that have curbside recycling collection were not factored in to Table 4.3

Featured buildings

One featured MR property is 123 Avenue (address changed due to privacy concerns). This MR property has 13 units and before the MR recycling project was implemented they had a 6 cubic yard front end garbage bin for garbage and curbside blue box recycling. A front end garbage bin is an easy way for residents to dispose of garbage on a continuous basis while curbside recycling means the resident must place out a blue box on a collection day only once a week and collect the blue box after collection. To ensure that recycling was as easy as disposing of garbage, this MR property was provided with a 6 cubic yard front end recycler, placed beside the 6 cubic

yard front end garbage bin, as shown in Appendix C. Before the MR recycling project was implemented, this property had a maximum recycling capacity of 70 litres per unit. After the MR recycling was implemented, this property had a maximum recycling capacity of 353 litres per unit. As well, switching the recycling container from curbside blue boxes to a front end recycler is expected to attract residents to recycling as it is an easy, permanent method that is twinned with the garbage.

A second featured property is 123 Boulevard (address changed due to privacy concerns). This MR property has 15 units and before the MR recycling project was implemented they had a 6 cubic yard front end garbage bin and 3 otto carts for recycling. To increase the recycling capacity at this MR property, a 6 cubic yard front end recycler was provided to the property, placed beside the garbage bin, and the otto carts were removed as shown in Appendix D. Before the MR recycling project was implemented, this property had a maximum recycling capacity of 72 litres per unit. After the MR recycling was implemented, this property had a maximum recycling capacity of 306 litres per unit.

Phase 3: Send out revised MR agreements

The City revised its waste management agreement, coinciding with the MR recycling project, to allow for more innovative approaches to MR recycling. The City's revised waste management agreements state that recycling is mandatory at the MR property and that the property owner must annually distribute recycling materials, provide recycling materials to existing and new tenants and post recycling information in common areas. As well, the property owner is to ensure that only eligible blue box materials are placed in the recycling containers that are serviced by the City. Recommendations are provided in the MR property superintendent manual to help property owners motivate new tenants to recycle which includes; giving them a recycling package (P&E materials), showing them the recycling location, explaining the recycling program as part of their lease to live in the building and having a clause in the lease stating recycling is mandatory. The revised agreement also states that City provided recycling containers (MURFE's) must remain with the unit or can be replaced for a fee. Ensuring the MURFE's remain with the MR unit will allow new tenants to easily recycle upon moving into the new property.

Every MR property that has a waste management agreement with the City must state a name and contact details for an individual who will act as the property's Recycling & Waste Coordinator. If a contact is not given for this position, the agreement states that the owner of the MR property is deemed the property's Recycling & Waste Coordinator. The property's Recycling & Waste Coordinator is an alternative contact for the City and is to act as a recycling leader for the building. As well, this individual may require mandatory training, as outlined in the agreement, if deemed necessary and/or beneficial to the MR property, in the future.

Phase 4: Increase recycling container capacity

Having enough storage space for recyclables is one of the most critical factors in a successful recycling program and it is important to address this first before other program improvements are put in place. During Phase 2 site visits, the baseline container quantities were recorded and information was collected about where containers could be relocated within the building to provide more convenience to residents. Site visits also provided the opportunity to determine if additional containers were required and where additional containers would be stored and ultimately used. As well, a City waste contractor inspected the MR properties to determine the opportunity for additional recycling capacity at each site.

Type of recycling containers

Recycling storage space is referred to as 'capacity' and is the shared recycling containers used by building residents to deposit their recyclables. In the CGS, the type of recycling container depends on the agreement the MR property has with the City as there are 3 options for MR property recycling. MR properties can recycle using either blue boxes (for curbside collection) or otto carts (95 gallon carts) or a front end recycler (2 or 4 or 6 cubic yard bin). When a MR property has an agreement with the City and they have a front end garbage bin, they must now have either a front end recycler (if space permits) or otto carts, due to a condition in the City's revised waste management agreement. Previously, some MR properties had a front end garbage bin and curbside recycling collection. The CGS found that this was a hindrance to MR property recycling so along with this project, the CGS twinned all garbage and recycling containers so that the same system (either all curbside or all containerised) is used at each MR property. MR properties that had the space available to receive a front end recycler did so at no cost to the property. MR properties that could only fit otto carts

were given more otto carts if required, at no cost to the property owner. The remaining MR properties that have curbside recycling (and curbside garbage) collection continue to receive blue boxes at no cost to the property owner. All recycling containers for MR properties are supplied by the CGS.

MR properties were inspected by the City's waste service contractor to determine how to twin garbage and recycling containers, as well as how to increase the recycling capacity which depended on the MR property site. The City's contractor made recommendations based on the MR property site and sent them back to the City's Environmental Services Division. The CGS's Environmental Services Division then determined the number/size of the recycling container(s) based on the space available at the site and the number of units at the building. MR properties that have between 7 and 50 units are provided with a 6 cubic yard front end recycler, where space permits a front end recycler. Each incremental increase of 50 units permits another 6 cubic yard front end recycler. MR properties that do not have the space for a front end recycler are given otto carts based on the best practices of a minimum of 50 litres per unit. MR properties that have curbside recycling collection are given one blue box per unit. If at any time a MR property requires more recycling capacity, the City will work with the property owner to meet their recycling needs (i.e. provide additional lifts or additional containers). All MR properties are provided with recycling containers based on the best practices minimum of 50 litres per unit though this minimum is frequently exceeded by the CGS.

How much recycling capacity is being provided?

Based on the provincial target of recycling 70% of all recyclables it is recommended that each residential unit be provided with a minimum of 50 litres of storage capacity. This is equivalent in size to a standard 14 gallon blue box. In terms of multi-residential containers, the following guidelines are recommended by CIF and are considered best practices:

- 360 litre carts one cart for every 7 residential units
- Bulk bins one cubic meter for every 15 residential units (eg, a 4-yard bin for 60 units)

Continuous Improvement Funding is provided on the basis that municipalities implement these best practice ratios. The guidelines represent average requirements and it is assumed that at the building level there will be ranges depending on the demographics.

Implementing the best practices minimum of 50 litres per unit was followed stringently by the CGS during the MR recycling project implementation. Though the number of recycling containers declined during the implementation of this project, there was a sharp incline in the number of large capacity recycling containers (front end recyclers), as shown in Table 4.4, which allowed for an increase in MR property recycling capacity. The CGS worked alongside all property owners and the City's waste contractors to ensure that this guideline was met at each MR property. MR properties that require additional recycling capacity will be noted by collectors and/or property owners and either will notify the City directly. Subsequently, the City will work with the property owner to increase the property's recycling capacity. As shown in Graph 4.5, there is a positive relationship between the capacity in litre per unit available for recycling and the estimated kilograms per unit per year recycled. For that reason, the City will work with MR properties to ensure that there is always sufficient recycling capacity available for tenants to allow for a maximum amount of recyclables to be captured.

Table 4.4: Total number of recycling containers

	Baseline June 2010	Post implementation March 2012
Units with recycling service	13,275	14,077
Blue boxes (properties with curbside collection)	168	80
95 gallon carts	553	210
4 yard bins	8	18
6 yard bins	64	276
Total program capacity in litres	717,948	1,403,120
Capacity per unit (L/unit)	54	99

Capacity and Recovery (g/unit/year (estimated) Capacity in litre per unit available for recycling

Graph 4.5: Relationship between number of recycling containers and recycling

*MR properties with curbside collection were not inspected and were given a capacity of zero litres/unit.

Other initiatives to increase recycling

Coinciding with the MR recycling project, the CGS revised all waste management agreements with MR properties. The revised agreement placed the fee on garbage collection only which meant that there was no charge for recycling collection. This is a reverse on the charges from the City's previous waste management agreement. The fee for garbage service offered in the revised agreement was set at a very low-rate which was intended to attract more MR properties to the City program and subsequently to recycling as recycling is mandatory in the City's revised agreement.

Collectors use run sheets when servicing the MR property recycling containers. These run sheets allow the collectors to document any issues i.e. contamination, bin damage etc. The run sheets are sent to the City's Environmental Services Division on a daily basis and allow the City to track and address any MR recycling issues that may arise.

Phase 4: Provide promotion & education materials

Print materials

A project goal was to distribute new print materials to promote recycling and educate building residents and staff about what can and cannot be recycled.

Municipalities have access to print templates (resident flyers, posters and signs for buildings, container labels and a guidebook for superintendents, property managers and building owners) through the CIF website. The template materials were customized with municipal specific information.

The CIF Best Practice Guidelines recommends strategies for distribution of print materials which include that municipalities take responsibility for:

- Distributing print materials directly to residents,
- · Distributing and displaying posters at multi-residential properties, and
- Applying labels to recycling containers.

A MURFE kit was delivered door-to-door to each MR unit that had a front end recycler or otto carts. The MURFE container held the P&E materials which included: a magnet that shows what is recyclable in the CGS (based on the CIF template), a recycling brochure to explain in more detail what is recyclable in the CGS (based on the CIF template), an information sheet to explain to MR residents what to do with their furniture, appliance and electronic waste and another information sheet that explained what services the City provides for the MR property and what services their property owner is responsible for (as agreed upon in the waste management agreement between the City and the property owner). Please see Appendix F for the MURFE kit P&E materials. The recycling brochure placed in each kit was specific to the property and either detailed recycling for otto carts or recycling for front end recyclers. A poster was designed by the CGS's Environmental Services staff that was placed in the entrance(s) or the lobby of the MR property when the MURFE kits were being delivered, to advise residents of the program, Appendix D. As well, bin labels were created based on the CIF template that were placed on all otto carts and all front end recyclers, Appendix G. A superintendent manual was also produced based on the CIF template, Appendix H. This manual outlines the property owners responsibilities under their waste management agreement with the City, how to assist tenants in recycling, how tenants can divert other forms of waste i.e. household hazardous, e-waste etc., the challenges and solutions faced by recycling in MR properties and resources available to property owners to support them. A letter for new tenants and a tenant checklist are included with the superintendent manual given to property owners, Appendix I. The letter and checklist explain the recycling process at the MR property and help new tenants familiarize themselves with the diversion opportunities offered at the MR property. The superintendant manual, new tenant letter and checklist were mailed to the property owners unless the superintendent was identified as the main contact for the property. Please see Table 4.6 for the summary of P&E materials used.

Table 4.6: Summary of Promotion & Education materials used

Promotion & Education component	Number distributed	Method of distribution
Posters	500 1 per building	By municipal staff to each property entrance (more placed if there was more than one entrance)
Recycling Brochure	14,000 1 per residential unit	By municipal staff at each unit (inside MURFE kit)
Magnet	14,000 1 per residential unit	By municipal staff at each unit (inside MURFE kit)
Information Sheets	14,000 1 per residential unit	By municipal staff at each unit (inside MURFE kit)
Containers labels	600 – 1 per cart/bin	By municipal staff (placed on each otto cart or front end recycler)
Superintendent	440	
Package	For each property owner	
(Superintendent	or superintendent	By mail
Manual and New	(whomever the identified contact for the	
Tenant Letter and Tenant Checklist)	property was)	

Other Promotional Materials

The City's website was updated to add a new section that explains MR properties and the MR recycling project. The site has sections for property owners/managers and tenants with links to all of the P&E materials for tenants & superintendents. As well, the site explains property owners' responsibilities and the P&E materials designed specifically for them as well as the P&E materials they can give their new tenants. The site has been designed as a resource area for property owners, superintendents and

tenants so that they can easily access and print off the P&E materials as well as contact the City with any inquiries.

MURFE kits were distributed to every MR unit. The kits were assembled and comprised of a MURFE container and the relevant P&E materials. The P&E materials within the kits included: a magnet showing what is recyclable in the CGS, based on the CIF template, a recycling brochure to explain in more detail what is recyclable in the CGS, based on the CIF template, an information sheet to explain to MR residents what to do with their furniture, appliance and electronic waste and another information sheet that explained what services the City provides for the MR property and what services their property owner is responsible for (as agreed upon the waste management agreement between the City and the property owner). These kits were delivered by municipal staff, door to door to each unit.

Timing of Promotion & Education campaign

At the beginning of this project in 2010, the CGS had an excel spreadsheet that stored all MR property data. This spreadsheet was used by the individual hired to do all WDO-CIF site inspections. These site inspections allowed the City to estimate the quantity of recyclables being recycled at each MR property. The MR property spreadsheet was updated during the site inspections from August 2010 to October 2010 and all data was logged in the fall of 2010. Once the site inspections had been completed, the MR Database was loaded onto the CGS's system and MR property data was taken from the spreadsheet and placed onto the MR database. From the fall of 2010 to the winter of 2011, the City's waste contractor also completed inspections to determine the potential recycling capacity increase at the MR properties. After all of these site inspections were completed, revised City waste management agreements were sent to each MR property owner from the fall of 2010 to the spring of 2012. The revised agreements outlined many new parameters for recycling. Once the revised agreements were signed and returned to the CGS by the MR property owner, the recycling container for the property was amended, to increase recycling capacity, as per the revised agreement. As a result, many MR properties were switched to a 6 cubic yard front end recycler if possible or more otto carts were given to the MR property or the MR property remained curbside with blue box collection. All MR property agreements were updated from the fall of 2010 to the spring of 2012. All P&E materials for tenants, property owners and superintendents, as well as the MURFE kits were distributed to the MR

properties once the revised agreements were signed and the recycling container(s) were delivered. The City's website was also revised to include all P&E materials in a specific MR section for tenants, property owners and superintendents. The CGS had an approved budget of \$36,425 and spent an actual \$27,678. The MR recycling project commenced in the CGS in the summer of 2010 and was completed in the spring of 2012.

Project budget and schedule

Most of the costs of the MR recycling project were on or under budget including the MURFE containers, fridge magnets, posters and bin labels. The resident brochures exceeded the expected budget due to printing and translation costs. The fridge magnets and posters cost less than budgeted due to the printing rates acquired. A large expense for this project was the customisation of the P&E materials that were provided by WDO-CIF. The P&E materials supplied had to be modified to reflect the CGS's recycling program and MR recycling project. Additionally, the CGS included an extra information sheet within the MURFE kit to address other diversion opportunities at MR properties (furniture and appliances) to help educate tenants, superintendents and property owners on all forms of waste diversion at MR properties.

As shown in Table 5.1, the MR recycling project did take longer than expected. Before the CGS could implement the project, all of the City's MR property owners had a revised waste management agreement sent to them and the City had to wait to have these signed agreements returned. As there are over 400 MR properties within the CGS, this procedure turned out to be a lengthy but necessary process. Once the CGS received a signed agreement, inspections and the subsequent steps of the project ensued.

Table 5.1 Project schedule, planned and actual

Project Deliverables	Approved Payment (upset limit)	Percent	Expected Completion Date	Completion Date
Phase A-D details	\$25,678	93%	Dec-10	Jan-12
Submit final report	\$2,000	7%	Feb-11	Jun-13
CIF Funds Requested	\$27,678	100%		

Concluding comments

As a result of the MR recycling project, the CGS did not see an extensive increase in the number of MR properties with access to recycling but did see a substantial increase in recycling capacity and tonnes diverted at MR properties. The nearly 13,000 MR units in the CGS receive recycling collection through the City while a few have private collection arrangements. The City revised its MR property waste management agreements alongside the MR recycling project to ensure MR recycling was an easily accessible option for all MR properties. The revised agreements allow the City to offer a low-cost rate for garbage collection and require mandatory recycling, at no cost to the MR property owner. These revisions attracted more MR properties to the City's waste management agreement and to MR property recycling. Various forms of guidance and educational materials have been made available for property owners, superintendents and tenants to ensure recycling occurs with ease. WDO-CIF site inspections were completed by a trained individual to estimate each MR property's recycling rate. Another site inspection was completed by a City waste contractor at each MR property to assess the potential recycling capacity increase. The site inspections allowed the CGS to note the barriers to recycling that MR properties were facing and address those issues in the MR recycling project. The main goals of the CGS MR recycling project were to increase recycling capacity and to twin all waste containers at MR properties. All MR properties in the CGS with a City agreement are either entirely containerised or curbside. There are three options for waste disposal at MR properties: 1 - garbage and recycling collection curbside; 2 - garbage collection in a front end bin

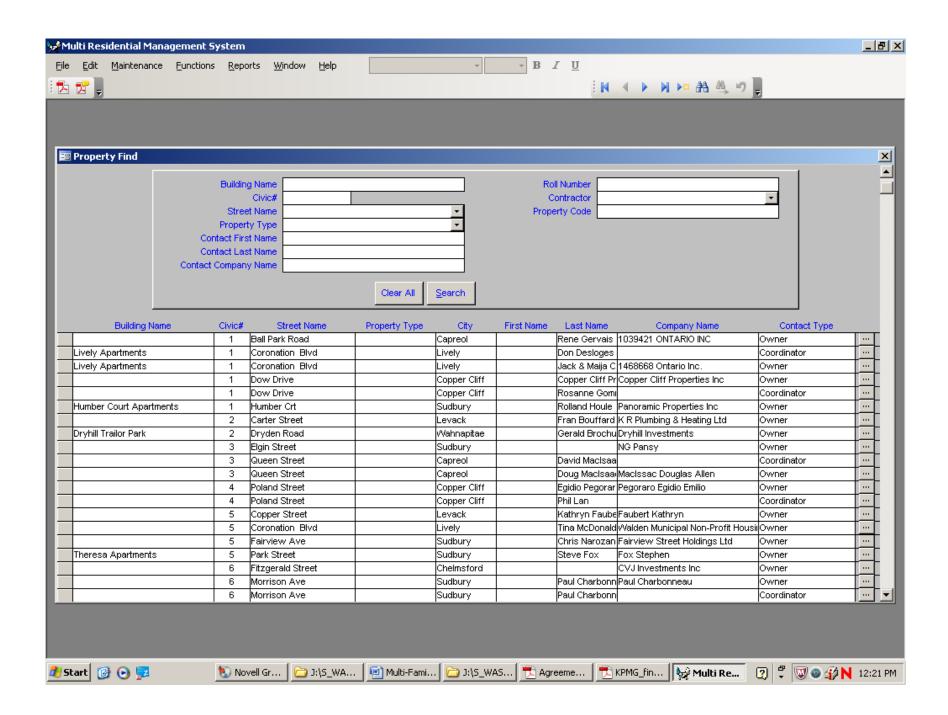
and recycling collection in a front end bin; 3 - garbage collection in a front end bin and recycling collection in otto carts. All containers were twinned to ensure consistency in waste disposal and to ensure that MR property recycling was a viable option for tenants. Throughout the project, the CGS ensured that the best practices minimum of 50 litres per unit was met and/or exceeded at each MR property. The CGS created kits that were delivered to each MR unit. These kits consisted of a MURFE bin that will be used by tenants as an individual apartment-size blue box and an assortment of customized P&E materials to inform residents of the City's recycling and diversion programs. A superintendent manual was also customized to inform property owners and superintendents of their roles and responsibilities in regards to MR recycling. The CGS's website has been updated to include the MR recycling project, the available eresources (P&E materials handed out) and contact information for tenants, property owners and superintendents to get in touch with the City for any issues or inquiries. Overall, the MR recycling project took longer than anticipated as just over 400 MR property agreements had to be revised ahead of project implementation. As the recycling capacity of MR properties has increased and all MR properties with a City agreement now have twinned garbage and recycling containers, the CGS has seen an increase in the number of MR tenants recycling and subsequently an increase in the amount of recyclables diverted and captured from MR properties.

Appendix A – WDO-CIF-Multi-Res Site Visit Form

City of Greater Sudbury: Multi-res Site Visit Form (supported by excel & access files)

Address (full mailing) :	
Units: Site Visi	t Date & Day of Week:
Building Type: Condo / Rental / Senior / Student / Co-op / Public Garbage: Municipal / Private	Recycling Collection Day(s):
Recycling: Municipal / Private	Garbage Collection Day(s):
Contact Information	
Property Management Info: Same as owner □	On-Site Contact Info:
Company Name:	_ Super / Building Manager / Property Manager / Owner / NA
Contact Name:	Name:
Phone #:	Phone #:
Cell #:	Cell #:
E-Mail:	E-Mail:
Address:	Address:
Performance Evaluation: # containers, # full co	ontainers
Recycling Container Quantities: # of 95 gal =	# Other Carts (ex. 65 gal)/4yd bins =
Estimate total # full or part full 95 gal carts (to be com	pleted just before pickup:
OCC : how is it managed & approx quantity:	
Barrier Evaluation: Rate on a scale of 1 to 3: 1 = Ba	d and requires attention, reserve rate of 3 for Excellent
OCC Contamination	Stream mixing Accessibility
Loose materials Overflowing carts	Area clean Area well light
Labels & Signage	
Recycling & Garbage Area Description – check	all that apply
Garbage Containers: # bins x size	Garbage Chutes ☐ Or curbside ☐
Recycling Area: Outdoor ☐ Outdoor Under cover ☐ Ins	side room \square Main FI \square Under ground \square Collect from each floor \square
Pickup location and truck access notes	
Number of Recycling Depots Twinned with ga	rbage \square Recycling containers shared with other buildings \square
Addresses that share (note don't double count contain	ners)
Room to add more recycling containers? Specify quare	ntity: 95 gal 4 yard 6 yard
Where?	
Comments:	

Appendix B - Screen Capture of MR Database



Appendix C - Featured Building: 123 Avenue







Appendix D - Featured Building: 123 Boulevard







Appendix E – MURFE Delivery Poster

Apartment Size Blue Boxes Have Arrived!



Use this convenient blue box to carry recyclable items to the property's centrally located large recycling container.

Check inside your new blue box to find out:

- What is recyclable
- ▶ What to do with furniture
- ▶ What to do with electronic waste
- What to do with leaf and yard trimmings
- ▶ What to do with household hazardous waste

*** Are you moving soon? These blue boxes stay here when you move since they belong to the property owner. Blue boxes will be available at your new residence if it is part of a recycling program.

For more information, contact the property's Recycling and Waste Coordinator, or contact the City's Environmental Services Division at 3-1-1





Appendix F - MURFE Kit and P&E Materials

Do not recycle:

PLASTIC
Chip bags
Straws
Styrofoam peanuts
Bubble wrap
'Crinkly' plastic
packaging such as
pasta packages
Motor oil containers
Zipper-style

plastic bags

GLASS

Broken glass Windows/mirrors Light bulbs Pottery Ceramic dishes and cups

METAL

Food-contaminated foil Coat hangers Pots and pans

PAPER/FIBRE

Cereal/cracker box liners Plastic food wrap Disposable paper cups Wood or wood crates Potato, flour, sugar and pet food bags

Greater Sudbury Recycles

Take a moment to sort and recycle. Every time you place materials in your recycling container you accomplish at least three good deeds for the day. First, you are diverting waste

from the landfill, and thus extending its life. Second, you are ensuring materials such as aluminum and paper that have many lives, can be used and reused to their fullest. And third, you are helping to save energy.







DROP EVERYTHING!

All that stuff that isn't garbage, and doesn't go in your blue recycling bin, can now be dropped off at convenient collection depots, for reuse, recycling or responsible disposal:

• Leftover paint and solvents, empty oil containers and used oil filters, antifreeze, propane tanks, fertilizers and pesticides, non-rechargeable batteries, televisions, computers and peripherals, fax machines and printers.

Do your bit to keep our communities livable. Learn more at the website hosted by Stewardship Ontario and Ontario Electronic Stewardship:

dowhatyoucan.ca

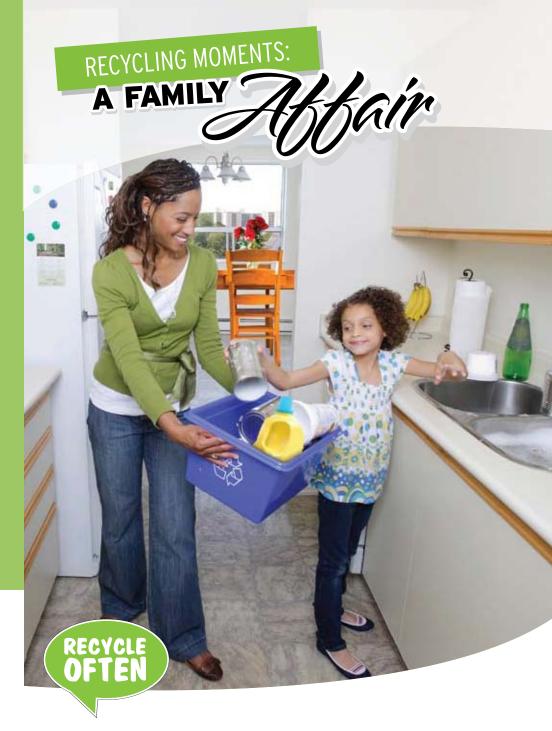








Help reduce the amount of waste that goes to our landfills. For more information on apartment recycling, please visit our website at **www.blueboxmore.ca**







Greater Sudbury's Recycling Guide.

Acceptable Materials

Corrugated Cardboard & Pizza Boxes – Flatten to a 30"x30" size and

remove all plastics. Do not include waxed cardboard.

Boxboard – Cereal, shoe, detergent, cracker, toothpaste, paper rolls etc. Remove plastic liners and flatten.

Newspaper, Magazines, Catalogues & Junk Mail – Newspapers, inserts, flyers, magazines, catalogues, junk mail, telephone books and hard & soft covered books.

Household Paper – Writing/printer paper, envelopes, greeting cards, nonfoil gift wrap, non-treated paper bags.

Plastic Bottles, Jugs, Tubs, Pails, Trays, and Foam Packaging – Look for the #1, #2, #4, #5 and #6 recycling symbol to determine if the packaging item is recyclable. Exclude motor oil jugs, foam peanuts, foam insulation. Rinse all plastics.

Plastic Bags – Grocery, bread, produce and frozen vegetable bags, dry

cleaning bags, outer wrapper for toilet tissue and other paper products. Remove paper receipts and place bags in one tied plastic bag.

Clear & Coloured Glass Bottles & Jars – Rinse

Milk & Juice Containers/Cartons -

Juice boxes, packaged milk & soy beverages, wine packs, milk cartons. Remove straws and rinse.

Egg Cartons – Paper and foam egg cartons.

Aluminum & Steel Cans, Aluminum Foil, Pie Plates and Trays – Food and beverage cans such as soda cans, vegetable cans. Rinse.

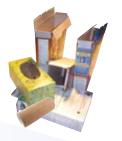
Empty Paint Cans & Aerosol Cans –

Ensure paint can is empty and dry, remove lids from cans and recycle separately.

Cardboard Cans – Remove plastic seal off cardboard cans and rinse.



Corrugated Cardboard & Pizza Boxes (flatten and remove plastics)



Cereal/Tissue Box, Cardboard Tubes



Newspapers, Magazines, Catalogues, Inserts, Telephone Books and Books



Household Paper

Front-end Recycling Container



Plastic Bottles, Jugs, Tubs, Pails, Trays & Foam Packaging



Plastic Bags



Clear & Coloured Glass Jars/Bottles



Milk & Juice Containers/Cartons



Egg Cartons (Paper & Foam)





Aluminum & Steel Cans, Aluminum Foil, Pie Plates & Trays



Empty Paint Cans & Aerosol Cans (empty & dry, lids removed)



Cardboard Cans





Place recyclable items loosely in the recycling container.

City of Greater Sudbury Sudbury Recycling Guide





Acceptable Materials

Corrugated Cardboard & Pizza Boxes - Flatten to a 30"x30" size and remove all plastics. Do not include waxed cardboard

Boxboard - Cereal, shoe. detergent, cracker, toothpaste, paper rolls etc. Remove plastic liners and flatten.

Newspaper, Magazines, Catalogues & Junk Mail -

Newspapers, inserts, flyers, magazines, catalogues, junk mail, telephone books and hard & soft covered books.

Household Paper - Writing/ printer paper, envelopes, greeting cards, non-foil gift wrap, non-treated paper bags.

Plastic Bottles, Jugs, Tubs, Pails, Trays, and Foam Packaging

-Look for the #1, #2, #4, #5 and #6 recycling symbol to determine if the packaging item is recyclable. Exclude motor oil jugs, foam peanuts, foam insulation. Rinse all plastics.

Plastic Bags - Grocery, bread, produce and frozen vegetable

bags, dry cleaning bags, outer wrapper for toilet tissue and other paper products. Remove paper receipts and place bags in one tied plastic bag.

Clear & Coloured Glass Bottles & Jars - Rinse

Milk & Juice Containers/Cartons

- Juice boxes, packaged milk & soy beverages, wine packs, milk cartons. Remove straws and rinse.

Egg Cartons – Paper and foam egg cartons.

Aluminum & Steel Cans, Aluminum Foil, Pie Plates and

Trays – Food and beverage cans such as soda cans, vegetable cans. Rinse.

Empty Paint Cans & Aerosol

Cans – Ensure paint can is empty and dry, remove lids from cans and recycle separately.

Cardboard Cans - Remove plastic seal off cardboard cans and rinse.



Corrugated Cardboard & Pizza Boxes (flatten and remove plastics)



Cereal/Tissue Box, Cardboard Tubes



Newspapers, Magazines, Catalogues, Inserts, Telephone Books and Books



Household Paper



Plastic Bottles, Jugs, Tubs, Pails, Trays & Foam Packaging





Egg Cartons (Paper & Foam)



Milk & Juice Containers/Cartons



Aluminum & Steel Cans, Aluminum Foil, Pie Plates & Trays



Empty Paint Cans & Aerosol Cans (empty & dry, lids removed)









Waste Management Handbook

FOR HIGH DENSITY RESIDENCES

A property manager's guide to the City of Greater Sudbury's high density residential waste management program



Table of contents

Purpose	Section 2
Responsibilities under the agreement	
Your waste diversion program, getting started	
Communicating the information	
Challenges, tips and solutions	
Summary	
Resources at your disposal	



The purpose of this handbook

This handbook is written for property owners who have an HDR (high density residential) solid waste agreement with the City of Greater Sudbury. It clearly explains the agreement, and the responsibilities of everyone involved.

The City of Greater Sudbury strives to increase its waste diversion rate. Waste diversion is when we reuse, recycle or compost items instead of sending them to a landfill. The City of Greater Sudbury gladly provides a reliable and low-cost waste removal service with the understanding that property owners will help increase waste diversion.

By making it easy for your tenants to recycle and compost their waste, you're helping the environment in more than one way. First, recycling and composting saves raw materials, water and energy. Secondly, diverting waste saves valuable space in our community landfills.

The City of Greater Sudbury is committed to helping property owners and superintendents develop successful waste diversion programs. This handbook is part of that commitment, it outlines what's necessary to set up and maintain a great program. If you have questions about your program or are simply looking for suggestions, feel free to call us.





Contact Information

The City of Greater Sudbury
Phone (Local): 3-1-1
Long Distance: 705-671-2489
Fax: 705-671-1148
www.greatersudbury.ca/wastemanagement

Responsibilities Under the HDR Solid Waste Agreement



Your containerized solid waste agreement entitles you to:

- The use of commercial-size garbage container(s) for your tenants' bagged household garbage.
- · Weekly servicing of the garbage container.
- The use of recycling container(s) for your tenants' loose blue box recyclable material.
- Blue boxes for your tenants' recyclable material. These are initially provided free of charge, when tenants need new containers they must place their order through the property's Recycling and Waste Coordinator.
- Weekly collection of the recycling container(s).
- Access to the City's Household Hazardous Waste Depot and/or Toxic Taxi.

These services are provided with the understanding that the property owner and/or superintendents meet certain requirements.

- 1) Provide the necessary information to your tenants to successfully divert waste:
- Start and maintain an active program for waste diversion and recycling at the property. This means annually distributing informational material on waste diversion, recycling and composting to both existing tenants and new tenants. Also, the information should be posted in common areas.
- Notify tenants that their leaf and yard trimmings cannot be placed in the household garbage container and indicate the area where they are to place the leaf and yard trimmings on the property.
- Notify tenants that their blue box recyclables must be placed loosely in the recycling container.
- Give your tenants written material that explains what is recyclable and how the materials should be recycled.
- Notify tenants that appliances, furniture and electronic waste must not be placed in the household garbage container.

- Notify tenants that the household hazardous waste they generate must not be placed in the garbage or recycling container. Hazardous waste must be disposed of through the city's Household Hazardous Waste Program.
- 2) Dispose of your tenants' furniture, appliances and electronic waste:
- Create a clearly labelled area on site for residents to place their furniture, appliances and electronic waste.
 Tenants must know where to place these items on the premises. The property owner is then responsible for disposal of the furniture, appliances and electronics.



- These items can be brought to the municipal landfill and waste diversion site.
- When you segregate your load, tipping fees will not apply to electronic waste and appliances, as long as they are delivered to the diversion areas within the municipal landfill site
- Tipping fees are applied to furniture. If the items are in good condition, you may wish to divert these items by donating them to charitable organizations.

3) Divert leaf & yard trimmings

- Create a clearly labelled area on-site for residents to place their leaf & yard trimmings. Tenants must know where to place these items on the premises.
- Divert leaf and yard trimmings at the municipal landfill and waste diversion site. When you segregate your load, tipping fees are not applied to leaf and yard trimmings. Alternatively, you may compost them on-site. Leaf and yard trimmings cannot be placed with the garbage.

4) Follow the containerized collection procedures prescribed by the City of Greater Sudbury:

- Keep hazardous waste out of the garbage and dispose of it through the City's Household Hazardous Waste Program.
- Ensure prohibited waste is not placed in the household garbage or recycling container(s). Prohibited waste includes construction, renovation, demolition, automotive and commercial waste.
- Ensure household garbage is bagged.
- Ensure recycling is placed loosely in the recycling container (i.e. not bagged).
- Ensure the container is not overloaded and the lid is closed. Any additional garbage may be delivered to the landfill site at the owner's expense. Alternatively, you may contact the hauling company that empties your garbage bin and make private arrangements for a second lift at the property owner's expense.
- Make sure there is unobstructed access to the household garbage and recycling containers (no posts, garbage, cars or snow banks...etc. in the way).





Your waste diversion program, getting started



The essentials

An important first step is assessing your property to learn how your residents can easily dispose of their recyclables, household garbage, leaf and yard trimmings, furniture and appliances, electronic waste and household hazardous waste. It's important to put yourself in the tenants' position to understand what will encourage and what will discourage them from disposing of these items properly.

Storage areas:

Outdoor or indoor storage areas are an important factor. Tenants will make use of them during the week to store their recyclables and garbage. Make sure the area is convenient, safe, and well lit. When these storage areas are easily accessible and large enough, you make it easy for tenants to recycle. Convenience is a key factor in having a successful program.

Blue Boxes

Your building needs enough blue boxes based on the number of total units. Upon commencement of your program, the City will provide you one Blue Box for each unit. You will need to distribute the boxes to your tenants.

Blue Boxes become the property of the building and should not be taken with the tenant when they move. It is your responsibility to ensure that these items are left in the unit when the tenant moves. Upon request from the appointed Recycling Coordinator, the City will provide additional Blue Boxes for a fee.

Hazardous Waste:

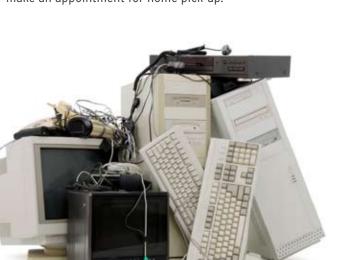
Your tenants have two convenient options for disposing of their hazardous waste properly and safely. They may deliver the items to the Household Hazardous Waste Depot located on Frobisher Street in Sudbury on select Saturdays (refer to the City's website or call 3-1-1 to find out when the depot is open). If they cannot deliver the waste themselves, they can call the Toxic Taxi at 705-560-9019 and leave a message to make an appointment for home pick-up.



Furniture and Appliances:

You must have outdoor locations for tenants to store their furniture, appliances and electronic waste. It's best if this location is not too far away from the building itself and it should be easily accessible throughout the year (cars or snow banks might get in the way).

The area must be clearly labelled to denote where you would like the tenants to place these items.



Education and Communication:

Don't forget to tell residents about your preparations. Effective communication at every stage of the program means educated residents and fewer problems to address.

Once you have planned your drop-off locations, think about how you can deliver the information to your residents. Effective handout material and wall posters mean your residents will be well educated and aware of the disposal process at your building. More education = fewer problems.

After you've communicated the details of your program with tenants, it helps to observe what happens on collection day. You can learn things through direct observation that you wouldn't otherwise know about. From here you can ask tenants for feedback on what works and what needs improvement.





Communicating the information

For any program to work, tenants must know what's expected and how to participate. This is done through word of mouth, posters in common areas and educational material for individuals. Updated materials should be sent out annually to all tenants and throughout the year as new tenants arrive.







The City of Greater Sudbury can help by providing the following educational materials:

- blue box fridge magnets
- customizable letter to new tenants
- customizable new tenant info sheet with important locations
- recycling brochure for tenants
- posters for common areas
- apartment-size blue boxes (no charge upon commencement of program but fees will apply for new or additional orders)
- ** Most of these materials are available online so it's easy to customize the document or simply print more when needed.

Additional tools you can use to improve communication:

- bulletin boards
- door hangers
- newsletters
- poster displays
- group discussions
- surveys
- feedback forms
- personal visits

SECTION 6

Challenges, Tips and Solutions

Many studies have been done on recycling in high density housing in Ontario. We can learn from these studies to avoid problems other superintendents have faced, or even predict and address problems before they occur.

Challenges you may face:

- · Recycling area has poor access, restricted hours of operation, poor lighting, lack of maintenance...etc.
- Tenants and building staff aren't sure what is recyclable and what is not.
- Information posters are sometimes outdated.
- · It's more difficult to address contamination (unacceptable material) in the recycling container.
- Older or disabled tenants may need special accommodation to participate.

Tips for a successful program:

- Provide updated information to new and renewing tenants about the building's program and the importance of recycling.
- By giving all tenants educational material and having visible recycling posters in the right areas, you show that recycling is an important priority at your building.
- Evaluate your program regularly.
- Surveys by telephone, email, or in person will help you customize your educational material in the future. Tenants provide valuable feedback.
- Ensure that building staff are well educated on the waste disposal policies so they can give correct information to the residents.

 Be creative and adapt to the needs of your tenants. For example, if a lot of waste is generated in the mail room, provide a blue box in that area.

· Set waste diversion goals for your building and congratulate residents when they reach those goals.

 Make recycling as convenient as garbage disposal.



SECTION 7 SECTION 8

Summary

We've covered the waste collection agreement-what it entails and how to run an effective waste diversion program. The City of Greater Sudbury provides a low-cost collection service as long as waste diversion is facilitated and encouraged at the property. Diverting waste means using the blue box, separating leaf and yard trimmings from household garbage and separating hazardous waste from household garbage. Also, there must be a space reserved for furniture, appliances, electronic waste and leaf and yard trimmings on the premises. Furniture, appliances and electronic waste can be donated or can be brought to the landfill for diversion or disposal.





Resources at your disposal

The City of Greater Sudbury's Environmental Services Division staff can be consulted regarding your program and how it can be improved. Please call 3-1-1 to discuss any questions or concerns.

As mentioned earlier, there are resources provided by the City which are posted on the website (www.greatersudbury.ca/wastemanagement) under the High Density Residential (HDR) section.



Greater Sudbury's Recycling Guide



Corrugated Cardboard & Pizza Boxes (flatten and remove plastics)



Cereal/Tissue Box, Cardboard Tubes



Newspapers, Magazines, Catalogues, Inserts, Telephone Books and Books



Household Paper



Plastic Bottles, Jugs, Tubs, Pails, Trays & Foam Packaging



Plastic Bags



Clear & Coloured
Glass Jars/Bottles



Milk & Juice Containers/Cartons



Aluminum & Steel Cans, Aluminum Foil, Pie Plates & Trays



Empty Paint Cans & Aerosol Cans (empty & dry, lids removed)



Cardboard Cans



Egg Cartons (Paper & Foam)



Need More Information?



Registered High Density Residential Properties with Containerized Collection Services

Your property owner has registered your building for solid waste collection services with the City. The following information outlines the services that are available to you from the City and what services must be provided to you by the property owner.

The City provides:

- Containerized household garbage collection services. All garbage must be bagged and placed inside the household garbage container.
- Containerized collection of recyclable material on a weekly basis. Loose recyclable material must be placed inside the recycling container. Do not bag recyclable material.
- Access to the City's Household Hazardous
 Waste Program. Hazardous waste must not
 be placed out for collection in any other waste
 stream or delivered to a landfill site.

The property owner shall provide or ensure:

- An area on site for the placement of your furniture, appliances, electronic waste, etc. This material cannot be placed in the garbage containers for collection.

 Contact the property owner/superintendent to determine site location;
- Each residential unit has one apartment size blue box. These blue boxes belong to the residential unit and you are not to take it with you when you move out;
- Information on solid waste programs (waste diversion, recycling, etc.) to new tenants and then annually as a reminder;
- Posting of solid waste information in common areas.



Furniture, Appliances and Electronic Waste

REUSE!

Instead of trashing items in good condition, consider donating or selling them.

The property owner shall provide an area on site for the placement of your furniture, appliances and electronic waste.

Contact the property owner/superintendent to determine the site location.



- Air Conditioners
- Armoires
- · Baby Car Seats
- Barbeques
 - Propane tank must be removed and taken to the household hazardous waste depot.
- · Barrels (large oak, metal or plastic)
- Baseboard Heaters
- · Basketball stand with net
- Bathtubs
- Bed Frames
- Benches
- Bicycles
- Blinds
- · Bookcases, Shelving **Units** (assembled)
- Box Springs
- Brooms
- Chairs (kitchen, folding, patio, high chair, wheel chair)
- Change Tables
- Chesterfields
- Christmas Trees (artificial)
- Coffee Tables

- Computers (home)
- Coolers (large)
- Couches
- Cribs (fully assembled)
- Curtain Rods
- Dehumidifiers
- Desks
- Dishwashers
- Drawer Chests or Dressers
- Drums (large oak, metal or plastic)
- Dryers
- End Tables
- Exercise Bikes (home)
- Exercise Equipment (home)
- Fan (large ceiling or floor fan)
- Filing Cabinet
- Fireplaces (all types)
- Floor Lamps
- Freezers (doors must be removed)
- Furnaces
- Futons
- Hampers
- Headboard and Footboard (for bed)
- Hockey Nets
- Hot Water Tanks

- · Ironing Board
- · Ladders longer than 4 feet
- Laundry Tubs (cement, plastic, metal)
- Lawn Mowers
 - Drain fuel and oil.
- Luggage
- Mattresses
- Microwaves
- Ovens
- Patio Umbrellas (please fold)
- Photocopiers / Printers (residential)
- Playpens
- Range Hoods
- Recliners
- Refrigerators (must remove doors)
- Shovels, Pitch Fork or Rake
- Skis
- Snow Blowers
 - Drain fuel and oil.
- Snow Boards
- Sofas
- Sofa Beds
- Stereo Equipment
- Stool

- Stoves
- Strollers
- Swing Sets (fully assembled)
- Tables
 - Kitchen, dining, coffee, end, patio, pool, picnic, etc.
- Toboggans (child's)
- Televisions
- Toilets
- Toys (large)
 - For example: plastic playhouses, rigid plastic pools, rigid plastic sand boxes, sleighs, hockey nets.
- Treadmills
- Trunks (must be empty)
- Typewriters
- Vacuum Cleaners
- VCRs and DVD Players
- Washing Machines
- Water Purifier
- Wheelbarrow
- Workout Benches (home)



Appendix G - Bin Labels

Recycling/Le recyclage





Appendix H - Superintendent Manual

Waste Management Handbook



A property manager's guide to the City of Greater Sudbury's high density residential waste management program



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The purpose of this handbook

This handbook is written for property owners who have an HDR (high density residential) solid waste agreement with the City of Greater Sudbury. It clearly explains the agreement, and the responsibilities of everyone involved.

The City of Greater Sudbury strives to increase its waste diversion rate. Waste diversion is when we reuse, recycle or compost items instead of sending them to a landfill. The City of Greater Sudbury gladly provides a reliable and low-cost waste removal service with the understanding that property owners will help increase waste diversion.

By making it easy for your tenants to recycle and compost their waste, you're helping the environment in more than one way. First, recycling and composting saves raw materials, water and energy. Secondly, diverting waste saves valuable space in our community landfills.

The City of Greater Sudbury is committed to helping property owners and superintendents develop successful waste diversion programs. This handbook is part of that commitment, it outlines what's necessary to set up and maintain a great program. If you have guestions about your program or are simply looking for suggestions, feel free to call us.





Contact Information

The City of Greater Sudbury Phone (Local): 3-1-1 Long Distance: 705-671-2489

Fax: 705-671-1148

www.greatersudbury.ca/wastemanagement

Responsibilities Under the HDR Solid Waste Agreement



Your containerized solid waste agreement entitles you to:

- The use of commercial-size garbage container(s) for your tenants' bagged household garbage.
- Weekly servicing of the garbage container.
- The use of recycling container(s) for your tenants' loose blue box recyclable material.
- Blue boxes for your tenants' recyclable material. These are initially provided free of charge, when tenants need new containers they must place their order through the property's Recycling and Waste Coordinator.
- Weekly collection of the recycling container(s).
- Access to the City's Household Hazardous Waste Depot and/or Toxic Taxi.

These services are provided with the understanding that the property owner and/or superintendents meet certain requirements.

- 1) Provide the necessary information to your tenants to successfully divert waste:
 - Start and maintain an active program for waste diversion and recycling at the property. This means annually distributing informational material on waste diversion, recycling and composting to both existing tenants and new tenants. Also, the information should be posted in common areas.
 - Notify tenants that their leaf and yard trimmings cannot be placed in the household garbage container and indicate the area where they are to place the leaf and yard trimmings on the property.
 - Notify tenants that their blue box recyclables must be placed loosely in the recycling container.
 - Give your tenants written material that explains what is recyclable and how the materials should be recycled.
 - Notify tenants that appliances, furniture and electronic waste must not be placed in the household garbage container.

- Notify tenants that the household hazardous waste they generate must not be placed in the garbage or recycling container. Hazardous waste must be disposed of through the city's Household Hazardous Waste Program.
- 2) Dispose of your tenants' furniture, appliances and electronic waste:
 - Create a clearly labelled area on site for residents to place their furniture, appliances and electronic waste.
 Tenants must know where to place these items on the premises. The property owner is then responsible for disposal of the furniture, appliances and electronics.



- These items can be brought to the municipal landfill and waste diversion site.
- When you segregate your load, tipping fees will not apply to electronic waste and appliances, as long as they are delivered to the diversion areas within the municipal landfill site.
- Tipping fees are applied to furniture. If the items are in good condition, you may wish to divert these items by donating them to charitable organizations.

3) Divert leaf & yard trimmings

- Create a clearly labelled area on-site for residents to place their leaf & yard trimmings. Tenants must know where to place these items on the premises.
- Divert leaf and yard trimmings at the municipal landfill and waste diversion site. When you segregate your load. tipping fees are not applied to leaf and yard trimmings. Alternatively, you may compost them on-site. Leaf and yard trimmings cannot be placed with the garbage.

4) Follow the containerized collection procedures prescribed by the City of Greater Sudbury:

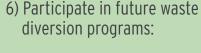
- Keep hazardous waste out of the garbage and dispose of it through the City's Household Hazardous Waste Program.
- Ensure prohibited waste is not placed in the household garbage or recycling container(s). Prohibited waste includes construction, renovation, demolition, automotive and commercial waste.
- Ensure household garbage is bagged.
- Ensure recycling is placed loosely in the recycling container (i.e. not bagged).
- Ensure the container is not overloaded and the lid is closed. Any additional garbage may be delivered to the landfill site at the owner's expense. Alternatively, you may contact the hauling company that empties your garbage bin and make private arrangements for a second lift at the property owner's expense.
- Make sure there is unobstructed access to the household garbage and recycling containers (no posts, garbage, cars or snow banks...etc. in the way).



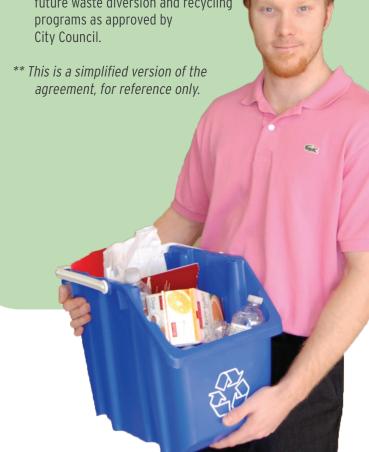


5) Recycling Coordinator

- Name an individual to act as Recycling and Waste Coordinator for the property. This is the person with whom the City will communicate regarding waste collection and diversion programs for the building.
- This person can also be designated to distribute information to the tenants and to report any problematic situations to the owner.



Take part in, and notify residents of future waste diversion and recycling programs as approved by City Council.



Your waste diversion program, getting started



The essentials

An important first step is assessing your property to learn how your residents can easily dispose of their recyclables, household garbage, leaf and yard trimmings, furniture and appliances, electronic waste and household hazardous waste. It's important to put yourself in the tenants' position to understand what will encourage and what will discourage them from disposing of these items properly.

Storage areas:

Outdoor or indoor storage areas are an important factor. Tenants will make use of them during the week to store their recyclables and garbage. Make sure the area is convenient, safe, and well lit. When these storage areas are easily accessible and large enough, you make it easy for tenants to recycle. Convenience is a key factor in having a successful program.

Blue Boxes

Your building needs enough blue boxes based on the number of total units. Upon commencement of your program, the City will provide you one Blue Box for each unit. You will need to distribute the boxes to your tenants.

Blue Boxes become the property of the building and should not be taken with the tenant when they move. It is your responsibility to ensure that these items are left in the unit when the tenant moves. Upon request from the appointed Recycling Coordinator, the City will provide additional Blue Boxes for a fee.

Hazardous Waste:

Your tenants have two convenient options for disposing of their hazardous waste properly and safely. They may deliver the items to the Household Hazardous Waste Depot located on Frobisher Street in Sudbury on select Saturdays (refer to the City's website or call 3-1-1 to find out when the depot is open). If they cannot deliver the waste themselves, they can call the Toxic Taxi at 705-560-9019 and leave a message to make an appointment for home pick-up.



Furniture and Appliances:

You must have outdoor locations for tenants to store their **furniture**, **appliances** and **electronic waste**. It's best if this location is not too far away from the building itself and it should be easily accessible throughout the year (cars or snow banks might get in the way).

The area must be clearly labelled to denote where you would like the tenants to place these items.





Education and Communication:

Don't forget to tell residents about your preparations. Effective communication at every stage of the program means educated residents and fewer problems to address.

Once you have planned your drop-off locations, think about how you can deliver the information to your residents. Effective handout material and wall posters mean your residents will be well educated and aware of the disposal process at your building. More education = fewer problems.

After you've communicated the details of your program with tenants, it helps to observe what happens on collection day. You can learn things through direct observation that you wouldn't otherwise know about. From here you can ask tenants for feedback on what works and what needs improvement.



Communicating the information

For any program to work, tenants must know what's expected and how to participate. This is done through word of mouth, posters in common areas and educational material for individuals. Updated materials should be sent out annually to all tenants and throughout the year as new tenants arrive.







The City of Greater Sudbury can help by providing the following educational materials:

- blue box fridge magnets
- customizable letter to new tenants
- customizable new tenant info sheet with important locations
- recycling brochure for tenants
- posters for common areas
- apartment-size blue boxes (no charge upon commencement of program but fees will apply for new or additional orders)
- ** Most of these materials are available online so it's easy to customize the document or simply print more when needed.

Additional tools you can use to improve communication:

- bulletin boards
- door hangers
- newsletters
- poster displays
- group discussions
- surveys
- feedback forms
- personal visits

Challenges, Tips and Solutions

Many studies have been done on recycling in high density housing in Ontario. We can learn from these studies to avoid problems other superintendents have faced, or even predict and address problems before they occur.

Challenges you may face:

- Recycling area has poor access, restricted hours of operation, poor lighting, lack of maintenance...etc.
- Tenants and building staff aren't sure what is recyclable and what is not.
- Information posters are sometimes outdated.
- It's more difficult to address contamination (unacceptable material) in the recycling container.
- Older or disabled tenants may need special accommodation to participate.

Tips for a successful program:

- Provide updated information to new and renewing tenants about the building's program and the importance of recycling.
- By giving all tenants educational material and having visible recycling posters in the right areas, you show that recycling is an important priority at your building.
- Evaluate your program regularly.
- Surveys by telephone, email, or in person will help you customize your educational material in the future.
 Tenants provide valuable feedback.
- Ensure that building staff are well educated on the waste disposal policies so they can give correct information to the residents.

 Be creative and adapt to the needs of your tenants. For example, if a lot of waste is generated in the mail room, provide a blue box in that area.

 Set waste diversion goals for your building and congratulate residents when they reach those goals.

 Make recycling as convenient as garbage disposal.



Summary

We've covered the waste collection agreement, what it entails and how to run an effective waste diversion program. The City of Greater Sudbury provides a low-cost collection service as long as waste diversion is facilitated and encouraged at the property. Diverting waste means using the blue box, separating leaf and yard trimmings from household garbage and separating hazardous waste from household garbage. Also, there must be a space reserved for furniture, appliances, electronic waste and leaf and yard trimmings on the premises. Furniture, appliances and electronic waste can be donated or can be brought to the landfill for diversion or disposal.





Resources at your disposal

The City of Greater Sudbury's Environmental Services Division staff can be consulted regarding your program and how it can be improved. Please call 3-1-1 to discuss any questions or concerns.

As mentioned earlier, there are resources provided by the City which are posted on the website (www.greatersudbury.ca/wastemanagement) under the High Density Residential (HDR) section.



The City of Greater Sudbury Phone (Local): 3-1-1 Long Distance: 705-671-2489 Fax: 705-671-1148





City of Greater Sudbury Sudbury Recycling Guide



Acceptable Materials

Corrugated Cardboard & Pizza Boxes - Flatten to a 30"x30" size and remove all plastics. Do not include waxed cardboard.

Boxboard - Cereal, shoe. detergent, cracker, toothpaste, paper rolls etc. Remove plastic liners and flatten.

Newspaper, Magazines, Catalogues & Junk Mail-

Newspapers, inserts, flyers, magazines, catalogues, junk mail, telephone books and hard & soft covered books.

Household Paper - Writing/ printer paper, envelopes, greeting cards, non-foil gift wrap, non-treated paper bags.

Plastic Bottles, Jugs, Tubs, Pails, Trays, and Foam Packaging

-Look for the #1, #2, #4, #5 and #6 recycling symbol to determine if the packaging item is recyclable. Exclude motor oil jugs, foam peanuts, foam insulation. Rinse all plastics.

Plastic Bags - Grocery, bread, produce and frozen vegetable

bags, dry cleaning bags, outer wrapper for toilet tissue and other paper products. Remove paper receipts and place bags in one tied plastic bag.

Clear & Coloured Glass Bottles & Jars - Rinse

Milk & Juice Containers/Cartons

- Juice boxes, packaged milk & soy beverages, wine packs, milk cartons. Remove straws and rinse.

Egg Cartons – Paper and foam egg cartons.

Aluminum & Steel Cans. Aluminum Foil, Pie Plates and

Trays – Food and beverage cans such as soda cans, vegetable cans. Rinse.

Empty Paint Cans & Aerosol

Cans - Ensure paint can is empty and dry, remove lids from cans and recycle separately.

Cardboard Cans - Remove plastic seal off cardboard cans and rinse.



Corrugated Cardboard & Pizza Boxes (flatten and remove plastics)



Cereal/Tissue Box, Cardboard Tubes



Newspapers, Magazines, Catalogues, Inserts, Telephone Books and Books



Household Paper



Plastic Bottles, Jugs, Tubs, Pails, Trays & Foam Packaging



Plastic Bags



Egg Cartons (Paper & Foam)



Milk & Juice Containers/Cartons



Aluminum & Steel Cans, Aluminum Foil, Pie Plates & Trays



Empty Paint Cans & Aerosol Cans (empty & dry, lids removed)



Cardboard Cans



Clear & Coloured Glass Jars/Bottles



Appendix I - New Tenant Letter and Checklist

Dear Tenant:

The property owner in partnership with the City of Greater Sudbury, is pleased to offer you waste collection and recycling services. As part of our building's recycling program, we encourage you to place recyclable materials in the proper receptacles. Details about the location of these receptacles are included.

In an effort to make recycling as convenient as possible, there is no need to separate different types of recyclable material. Simply place mixed recyclable material in our building's recycling containers. In addition, we encourage you to use your compact blue box to transport recyclable material to the recycling area.

Please place all recyclable material into the containers loosely and do not tie recyclable material in plastic bags (only shredded paper should be placed in a tied, clear plastic bag for recycling).

Flatten all cardboard boxes prior to placing them in the recycling bins.

Please refer to the attached list of items and the posters located in the recycling area to see what can be recycled.

By doing your part, you are helping our building divert waste from the landfill, which benefits our community and the environment. Thank you for your participation in the recycling program. Please contact me if you have any further questions.

Sincerely,

Superintendent/Recycling & Waste Coordinator



New Tenant Checklist

Waste Disposal for New and Renewing Tenants

This sheet will help you familiarize yourself with our building's waste disposal system. If you have any further questions or concerns, please contact your property's Recycling and Waste Coordinator.

Garbage
Garbage is placed in the container located
Recyclables
Acceptable material should be placed
* Refer to the attached magnet or recycling brochure to see what is and what is not recyclable. * Flatten cardboard before placing it in the bins. * Do not bag recyclables (exception for shredded paper).
Furniture and Appliances
Furniture and appliances should be placed
Leaf & Yard Waste
Leaf and yard waste should be placed
Electronic Waste
Old televisions, computers, cell phonesetc should be placed

Household Hazardous Waste

Hazardous waste can be brought to the Household Hazardous Waste Depot, or you can arrange to have the Toxic Taxi pick up the waste at your residence. Call 705-560-9019 and leave a message to make an appointment. Visit the City of Greater Sudbury's website for more information about household hazardous waste, www.greatersudbury.ca/wastemanagement.

