

# 2015 Solid Waste and Recycling

## A N N U A L R E P O R T





# Introduction and Highlights



The broad field of waste management is a complex discipline that includes, but is not limited to: environmental protection, public education, waste reduction, recycling, composting, material collection, data gathering and analysis, government regulation and public relations. For municipal governments it requires continually learning new strategies, complying with government regulations, as well as adapting and advancing techniques of waste diversion, collection and disposal. Waste management solutions and strategies are continually reviewed and enhanced and this report outlines how the City of Burnaby has worked to improve performance.

This annual report provides an overview of the City's waste management system including an outline of the programs and service elements in the upcoming year to achieve future waste diversion goals in Burnaby. Single family, multi-family and commercial/institutional waste diversion (recycling/green waste collection) and disposal (garbage) volumes are shown to illustrate waste trends.

## Highlights from the 2015 work plan include:

- Redesign of the Annual Curbside Collection schedule for ease of use and incorporation of seasonal information;
- Implementation of separation of glass containers/jars from mixed containers recycling stream for City-served multi-family complexes;
- Ongoing expansion of the food scraps program for multi-family complexes (150% increase in the number of multi-family buildings participating from 2014);
- Completion of implementation of Burnaby Public Schools Food Scraps collection program;
- Provision of a separate collection area for commercial recyclable materials from residential at the City's Eco-Centre;
- Inclusion of additional Solid Waste and Recycling Bylaw sections within the Bylaw Notification Bylaw;
- Continuation of education and outreach on contamination of residential recycling programs;
- Provision of five each of DreamRider Theatre education plays "Zero Heroes" (waste reduction, recycling and composting) and "Clean Up Your Act" (graffiti, vandalism and litter) plays to local elementary schools;
- Participation in the National Solid Waste Benchmarking Initiative; and
- Grand Opening of the Still Creek Works Yard.

# Table of Contents

|                              |    |
|------------------------------|----|
| 1.0 Policy .....             | 2  |
| 2.0 Programs .....           | 4  |
| 3.0 Performance .....        | 9  |
| 4.0 Places .....             | 14 |
| 5.0 Projects .....           | 15 |
| 6.0 People .....             | 16 |
| 7.0 Looking Ahead 2016 ..... | 18 |

## Figures and Tables

|  |    |
|--|----|
| Figure 1 – Single Family Curbside Garbage, Recycling and Green Waste Weights, 2006 – 2015 .....                                | 10 |
| Figure 2 – Multi-family, Industrial, Commercial and Institutional Garbage, Recycling and Green Waste Weights 2006 – 2015 ..... | 11 |
| Figure 3 – Tonnage of Recycling Materials (MMBC and Commercial) Collected at the Eco-Centre in 2015.....                       | 12 |
| Figure 4 – Green Waste Collected at the Eco-Centre, 2006 – 2015.....   | 13 |
| Table 1– Amount of EPR and Other Materials Collected at the Eco-Centre in 2015.....  | 13 |



# 1 Policy

Our City is one of 21 member municipalities that coordinate with Metro Vancouver on solid waste initiatives which shape the regional waste management system. Metro Vancouver, with the participation of its member municipalities, developed the regional Integrated Solid Waste and Resource Management Plan (ISWRMP) which was approved by the provincial Ministry of Environment in 2011. The City supports the regional Plan and the municipal actions in the Plan have been adopted by Council. The overall regional strategy moves towards a more aggressive waste diversion target of 80% by 2020. The ISWRMP details a plan to achieve this diversion and is summarised in the goals below:

**Goal 1:** Minimize waste generation

**Goal 2:** Maximize reuse, recycling and material recovery

**Goal 3:** Recover energy from the waste stream after material recycling

**Goal 4:** Disposal of remaining waste in a landfill after material recycling and energy recovery

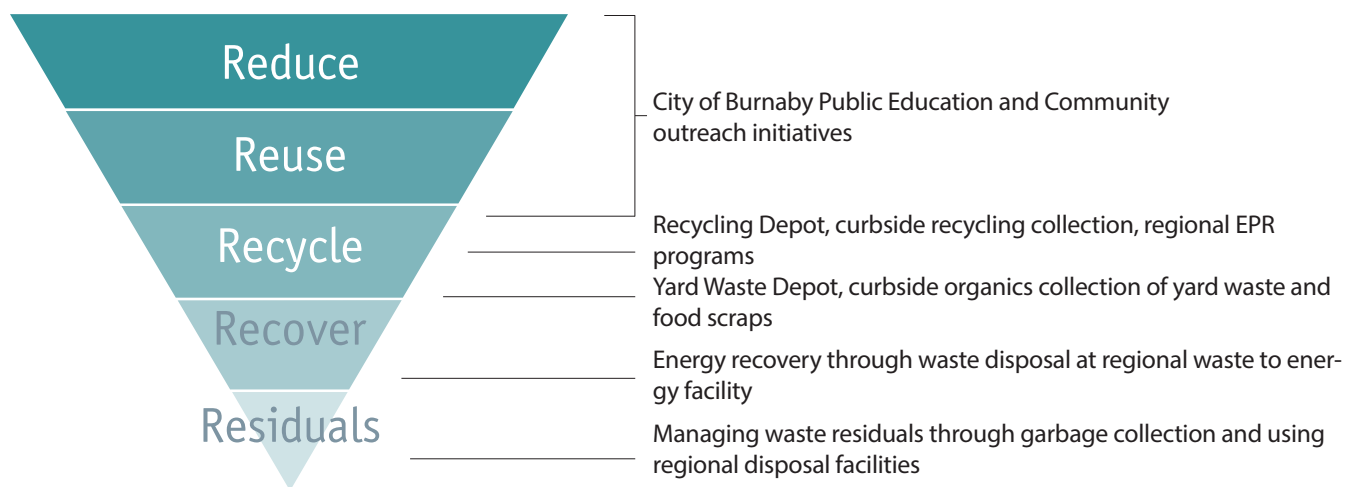
Waste reduction and material reuse are the first steps of the waste diversion hierarchy. Burnaby businesses and residents are encouraged to consider waste minimization in their purchases and identify opportunities for repurposing of items. Recycling is the third step in the five step waste diversion process. It removes materials from the waste stream which are considered resource commodities as well as lowers volume of waste that is left to manage

and dispose. Reduce, reuse and recycle elements rely on behaviour change and personal choices in order to be successful.

Even if participation in the first 3R's is high, there are still items that will be left over recovering energy and residuals management complete the waste disposal picture. Material that is not diverted by green waste collection, recycling or Extend Producer Responsibility (EPR) take-back programs is managed as Residual waste (garbage). Garbage collected from the residential/commercial sectors in Burnaby, is disposed of at the Metro Vancouver waste-to-energy facility located in South Burnaby or taken to the North Shore or Coquitlam Transfer Stations (to eventually be disposed of in the Cache Creek Landfill). The diagram below illustrates the programs the City is utilizing to address the 5R's with emphasis on reducing waste in the goal of managing less residual waste in the future.

Integration with Federal and Provincial Initiatives

In October 2009, the Canadian Council of Ministers of Environment (CCME) released a Canada-wide Action Plan for EPR. The Plan aims to increase diversion and recycling of municipal solid waste by better coordinating provincial EPR programs and by extending the application of the principle of EPR as a part of Canadian waste policy. The strategy calls for a number of commitments from provinces and territories, including lists of products to be considered for implementation.







British Columbia's industry-led Product Stewardship programs require producers of designated products to take extended producer responsibility (EPR) for the life cycle management of their products, including collection and recycling. The key features of EPR policy include shifting of responsibility (physically and economically) upstream to the producer and away from municipalities, and to provide incentives to producers to take environmental considerations into the design of the product.

#### **Current EPR materials include:**

- most electronics and electrical products, such as televisions, cell phones, small appliances, electronic toys and outdoor power equipment;
- paint, flammable liquids, pesticides and other household hazardous wastes;
- beverage containers;
- lighting, lightbulbs and tubes;
- thermostats, smoke and carbon monoxide alarms;
- medications;
- vehicle tires;
- household and lead-acid batteries;
- antifreeze, used oil, filters and containers;
- large appliances and
- packaging and printed paper.

#### **Future EPR materials include:**

- construction and demolition materials; and
- furniture, textiles and carpet

Our City works collaboratively with Metro Vancouver in advocating the Province to include additional products identified in the CCME Canada Wide Action Plan for EPR to the Provincial Product Stewardship Program. In addition, the City is a member of the National Zero Waste Council advocating, in part, producers to take environmental consideration into product and packaging design. For a complete list of materials accepted through EPR programs, please visit [www.burnaby.ca/takeback](http://www.burnaby.ca/takeback).



#### **Multi-Materials British Columbia**

The B.C. Recycling Regulation was amended in 2011 to require the producers of packaging and printed paper (PPP) to assume responsibility of residential PPP and transition the end-of-life management of PPP from the taxpayers to the industry and their consumers. Multi-Material BC (MMBC), an industry lead and funded non-profit organization, assumed the responsibility of managing residential PPP recycling on behalf of its members as of May 2014.

In 2013 the City signed onto an agreement with MMBC to provide recycling collection and program support to residents, and implemented the new expanded provincial recycling program as of May 19, 2014.

#### **Banned and Prohibited Materials**

Certain items are banned or prohibited from the garbage in Burnaby and Metro Vancouver as they are either recyclable or hazardous. All banned materials can be recycled or disposed of properly through municipal recycling programs, disposal companies or a Provincial EPR program.

The requirements for what is to be diverted and what is accepted in Burnaby's waste stream are governed by the City's Solid Waste and Recycling Bylaw. These requirements are available to all residents and businesses through the annual curbside collection calendar, multi-family recycling guides, the City's website, the City's Social Media, and the City's Colleciton App.

## 2. Programs



Our Solid Waste and Recycling Division of the Engineering Department is responsible for planning, implementing and operating Burnaby's solid waste collection, green waste collection, recycling collection, composting programs, litter pickup, large item and appliance program, abandoned material removal, waste diversion programs and related community outreach services. The solid waste management and recycling program integrates the principles of waste reduction, environmental preservation, participation and worker safety in order to serve the community. In 2015, the City continued to provide a multi-sector based service to single/two family households, multi-family units and commercial/institutional/civic facilities.

Our solid waste collection program was initiated several decades ago and the in-house collection service has been an integral part of the program. The solid waste and recycling programs that we bring you are made possible by a team of approximately 109 regular and auxiliary staff members as well as a fleet of vehicles. The integrated approach has allowed the City to deliver a multi-level program, meeting the changing needs of the community.

### **Curbside Collection Program** **Single Family Materials Collection**

Each week, curbside collection service is provided to approximately 35,000 single and two-family households in Burnaby. Fourteen automated trucks, two rear-end loading trucks, and one container delivery van comprises the garbage and green waste collection fleet. Every



household is provided with a garbage bin and a green bin of size dependant on the needs of their family. The collected garbage is delivered to Metro Vancouver facilities for disposal. The Green waste which includes kitchen food scraps, yard waste and annual Christmas tree collection program, is processed and turned into compost at the City contracted facility.

The curbside collection service also provides recycling collection to each household; a blue box for mixed containers, a grey box for separate collection of glass jars and containers and a yellow bag for mixed paper, cardboard and newspapers. The recycling continues to be loaded manually into a fleet of ten trucks. All collected recyclable materials are forwarded to MMBC facilities for processing.

### **Multi-Family, Industrial, Commercial and Institutional Materials Collection Service**

The multi-family and industrial/commercial/institutional (ICI) garbage collection service is a fully automated service which utilizes four jitney trucks and four front loading container trucks all of which are equipped with an automated lifting device to collect garbage and separated cardboard containers. The multi-family green waste and recycling collection program utilizes a semi-automated technology where a hydraulic lifting device at the rear of the green waste truck is used to lift and empty the green waste and recycling bins into the truck hopper.

In 2015, 98% of the multi-family complexes who receive City garbage collection service subscribe to City recycling service, with the remaining complexes being serviced by a private recycling service. The multi-family recycling





program utilizes totes provided by the City to each building complex for mixed containers, mixed paper and glass containers collection. The totes are rolled out to the curbside by building staff for weekly collection by City crews. The Solid Waste and Recycling Bylaw was amended in 2011, requiring multi-family complexes to establish recycling and green waste provisions within their facilities. The change gave City staff a tool to help ensure all Burnaby residents had access to recycling services even if they didn't subscribe to the City's collection services.

In 2011, the City expanded the Multi-family Green Bin Program to include food scraps. This program has grown from servicing 15 buildings in 2011 to 425 buildings in 2015, providing over 28,000 multi-family units access to the program. Similar to the Single-Family Food Scraps Program, it allowed multi-family residents to add specified kitchen food scraps (vegetable waste, meat waste and food soiled paper) to their green waste bins once they subscribed to the service. In addition to weekly green bin collection, the City provides an annual Christmas tree collection program for multi-family complexes that subscribe to City service for garbage, recycling and green waste.

As part of the Green Bin program roll out, multi-family buildings are offered informational workshops in addition to the information packages they receive, for residents prior to the launch of their complexes program. In 2015, staff conducted over 50 workshops (a 66.6 percent increase over 2014) with residents, prior to the roll out of the Green Bin program in their building.

Similar to the curbside collection program, garbage, recyclables and green waste are delivered to Metro Vancouver, MMBC and contracted composting facilities respectively.



### **Bulky Item Collection Service**

In addition to the weekly garbage, recycling and green waste collection services, special pickups can be requested by residents for bulky items such as mattresses, appliances, chesterfields, etc., a service that is valued by many residents. In 2015, the division received 7,257 service requests for bulky items (21.7% increase from 2014) and 3,126 service requests for appliance collection (35.4% increase from 2014).

As noted earlier, the Bulky Item Collection Service also includes the collection of mattresses. As a result of a disposal ban on mattresses in 2011, the City continues to collect and divert unsoiled mattresses to a recycling facility contracted by the City. A total of 4,747 mattresses and box springs were recycled, and diverted from disposal, in 2015 (27.9% increase from 2014).

### **Litter and Public Space Collection Program Streetscape Recycling and Waste Collection**

Littering is a common issue in dense, urban areas such as Burnaby. Litter on city streets and properties detract from Burnaby's natural environment and streetscape. The City has over 500 waste receptacles installed on major arterial roads, at bus stops and in heavy pedestrian traffic areas throughout Burnaby to provide public space waste management service. In furthering the waste reduction philosophy and to encourage recycling in public places, the City entered into an agreement with EcoMedia Direct Inc. (EcoMedia) in 2010, who supplied 200 of the City's receptacles that offer three disposal compartments - one for waste, one for mixed paper recycling and one for mixed container recycling. The project comes at no additional cost to the City with EcoMedia supplying and maintaining the bins. In return, EcoMedia has rights to



the advertising space on the front and back sides of the rectangular bins with a percentage of revenue payable to the City. A percentage of space on the units is allocated for City advertising at no cost. The City continues to explore additional opportunities to further encourage recycling in public spaces.

### Abandoned Material Service

The litter collection fleet consists of seven pick-up trucks that empty the receptacles on a regular basis and pick up litter on the streets and boulevards. Occasionally larger abandoned items such as old mattresses, chesterfields and appliances are found on the roadside. These abandoned materials are picked up by a garbage truck dispatched on an "as needed" or complaint basis. In 2015, the department received 1,842 (9.3% increase from 2014) service requests for abandoned items and general litter and City crews responded to an additional 16 special clean-up events (77.7% from 2014). Burnaby residents can report abandoned materials by calling Burnaby Solid Waste & Recycling Division.

### Civic Facilities – Public Space Recycling

Waste diversion in public areas of recreation facilities was previously limited to the collection of beverage containers and mixed paper. In 2013, the City's Parks, Recreation and Cultural Services Department partnered with the Engineering Department to develop an action plan to enhance public space recycling within recreation facilities and sports fields. Waste audits were conducted at Bonsor Recreation Complex, Edmonds Community Centre, Kensington Complex, Bill Copeland Sports Centre and CG Brown Memorial Pool to determine facility specific requirements for recycling receptacles and placement. Initially, four-stream recycling stations that include separation of mixed containers, mixed paper,



food scraps and food-soiled paper products and garbage were installed in public areas of Bonsor Recreation Complex, Bonsor 55+ and Edmonds Community Centre in conjunction with the introduction of the "I Recycle @ Work" staff recycling program for both facilities that included the establishment of Complex Champions to foster both the internal and external recycling systems.

In 2014, the program was expanded to include Eileen Dailly Leisure Pool & Fitness Centre, Cameron Recreation Complex, Willingdon Centre, Bill Copeland Sports Centre, CG Brown Pool, Kensington Complex and Confederation Community Centre. Program expansion included establishment of Complex Champions to steward the program, staff information sessions, and outreach to the facility users via facility newsletters, InfoBurnaby and by staff.

In 2015, staff continued discussions with Burnaby Parks and Cultural Services and Burnaby Public Library Branches for implementation of the public space recycling program in the remaining civic facilities. Implementation of this program will commence in early 2016.

## Corporate Diversion Programs

### City of Burnaby Employee "I Recycle @ Work" Program

The City's "I Recycle @ Work" Program was launched in 2011 at City Hall Main and West buildings and Burnaby Fire Halls. The program expanded in 2014 to include Eileen Dailly Leisure Pool & Fitness Centre, Cameron Recreation Complex, Willingdon Centre, Bill Copeland Sports Centre, CG Brown Pool, Kensington Complex and Confederation Community Centre. Increased waste diversion has been achieved not only through education and outreach by



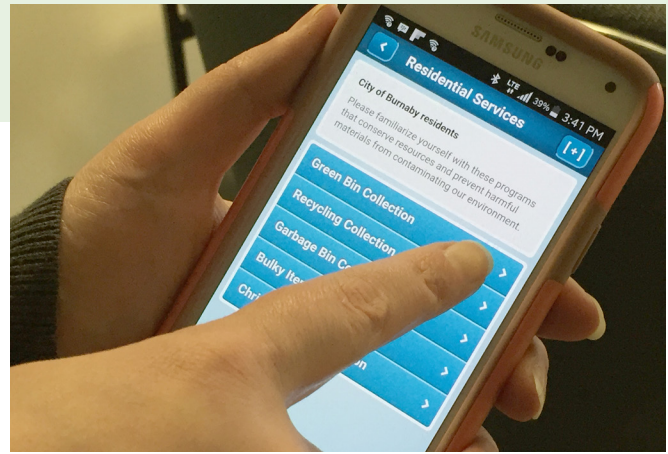


Department/Complex Champions, but also by having a unified and more streamlined system that is identifiable to staff throughout civic facilities. The recycling stations include:

- A three unit stacker for mixed paper (office paper, cardboard), mixed containers (food glass, metal and plastic containers) and newspaper.
- A lined container for the collection of food scraps.
- A separate container for the collection refundable beverage containers.
- Containers in each washroom for the collection of “clean” paper towel (paper towel used only for drying hands), to be recycled with mixed paper.

Outreach to new City staff about the “I Recycle @ Work” program is coordinated through the new employees seminars hosted throughout the year by the City’s Human Resources Department. At these seminars new employees are presented with information about the City’s “I Recycle @ Work” Program, the materials accepted, and are presented with the opportunity to become a Department Champion for their work area. Department Champions are also tasked to review the recycling program and station location(s) with each new employee in their department, foster the program within their department, and distribute information updates to all staff when changes or issues occur.

Internal audits of the participating programs are conducted yearly to determine and provide feedback on program performance as well as ensure that any contamination problems are addressed and the outreach information is tailored accordingly.



### City of Burnaby “Green Team”

The City’s internal Green Team meets monthly, and is made up of staff from various departments and offices across the City with the goal of updating and enhancing Guidelines and City practices for Sustainable Purchasing. This team enables a greater level of engagement and collaboration from staff on making informed sustainable purchasing decisions.

The Green Team has also been involved in outreach promoting paper reduction, holiday waste reduction, and other waste diversion initiatives such as the in-house collection program for florescent tubes, CFLs and specialty bulbs.

### Public Outreach and Education Programs

#### Waste Collection App

Single and Multi-family residents can avoid missing a collection day by downloading Burnaby’s free waste collection app. With the app, residents can set up reminders and get instant access to their garbage, recycling and green bin information. The app gets updated when needed so the information is always current. The app also provides the user with:

- collection day reminders for residential curbside collection schedules including alerts for holiday schedule changes;
- collection details including accepted items and preparation requirements for the recycling, green bin or garbage programs;
- drop off depot information through the “What goes where?” searchable database;
- “Report a Problem” feature to notify the City about missed collection, graffiti, litter and burnt out street lamps.



The app is currently available for apple and android operating systems only. In 2015, the number residents actively using the collection app was 9,345 (a 77.3% increase from 2014). In addition to the growth in users, the app allows the City to direct message users on collection schedule changes (statutory holidays, weather disruptions), special events (e.g. Christmas Tree Collection) and reminders about sprinkling restrictions. The app now allows the City direct content access for updating acceptable materials, adding images, sorting requirements, and has the capability for linkage to social media.

### Community Events and Seasonal Outreach Campaigns

Each year City staff look for outreach opportunities within the community to spread the word about how to reduce, reuse and recycle. In 2015, City staff participated in nine community events with displays featuring information on waste reduction, recycling, food scraps collection and composting. Participants benefit from new ideas and other tips on how waste diversion can be made easy. They can connect with staff to answer their questions and provide clarification on new programs and services offered. Some examples of events attended were: Great Salmon Send Off, Hats Off Day, Environment Week's Envirofest, Eco-Centre Open House, Still Creek Works Yard Grand Opening, City-Wide Garage Sale, Westburn Community Fair and Willingdon Centre Community Fair.



In addition to community events, the City takes part in seasonal outreach campaigns. In 2015 the City participated in seasonal campaigns that included What to do about 'Jack', promoting the composting of pumpkins in the City's Green Bin programs, Holiday Recycling Guide and Christmas Tree collection and Metro Vancouver's Create Memories, Not Garbage Christmas Campaign that included informational decals applied to doors or windows at City civic facilities.

### School Outreach

Reaching out to Burnaby's youth is an important part of the City's efforts to spread the City's waste reduction messages. City staff participated in one-on-one information sessions in the classroom and during summer camps, worked with teachers and students through Burnaby School District's Language Instruction for Newcomers to Canada (LINC) program and coordinated Zero Heroes, a waste reduction and recycling play from Dreamrider Theatre for our elementary students.

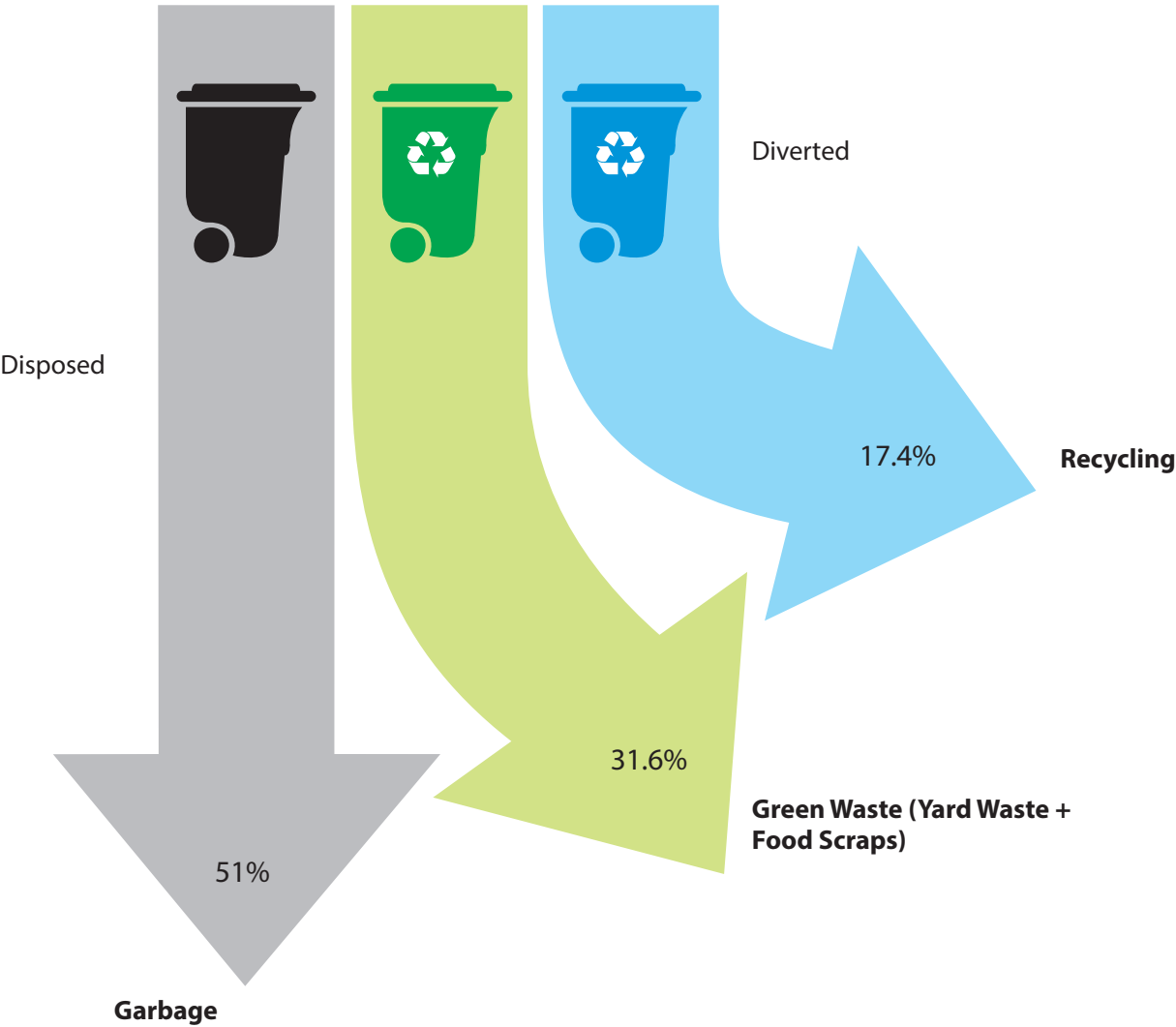


# 3. Performance

City services collected approximately 64,633 tonnes of garbage and recyclables (this does not include green waste) that was generated by Burnaby residents and businesses in 2015. The diagram below illustrates the disposal versus diversion rates. In addition to aspiring to new levels of waste reduction and diversion, we are committed to providing residents with an efficient and sustainable waste management service.



**2015 Breakdown of Disposal/Diversion Achieved of the City System (Single-Family, Multi-Family and Industrial/Commercial/Institutional)**



### Single Family Diversion

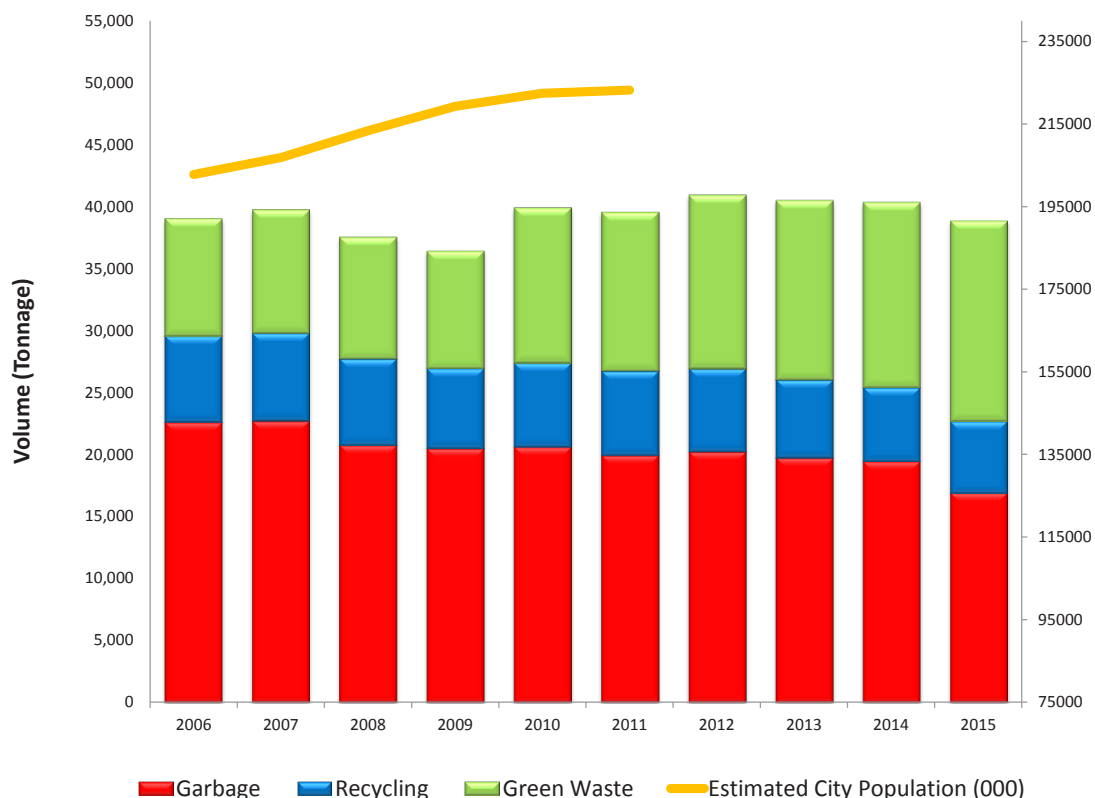
Prior to the introduction of recycling and green waste diversion programs, the annual volume of single family garbage collected was approximately 40,000 tonnes. In 2015, the volume of garbage was 16,916 tonnes (a decrease of 13 percent from 2014) and a reduction of approximately fifty-seven percent of the 1989 level.

As seen in Figure 1 below, the curbside recycling program continues to collect a steady volume of recyclable material. The well-established City recycling programs actively turn waste into resources. Thank you to all of our residents who have contributed to the success of these programs so far. With 40% of a typical residential household's waste consisting of food scraps and food-soiled paper products, there is an opportunity to increase our green waste diversion even further. With EPR programs expanding (see Places section) there are more opportunities to divert additional recyclable material. See [www.Burnaby.ca/garbageandrecycling](http://www.Burnaby.ca/garbageandrecycling) for more information.



**Figure 1- Single Family Curbside Garbage, Recycling and Green Waste Weights, 2006-2015**

\*As of June 2010, Green Waste = Yard Waste + Food Scraps





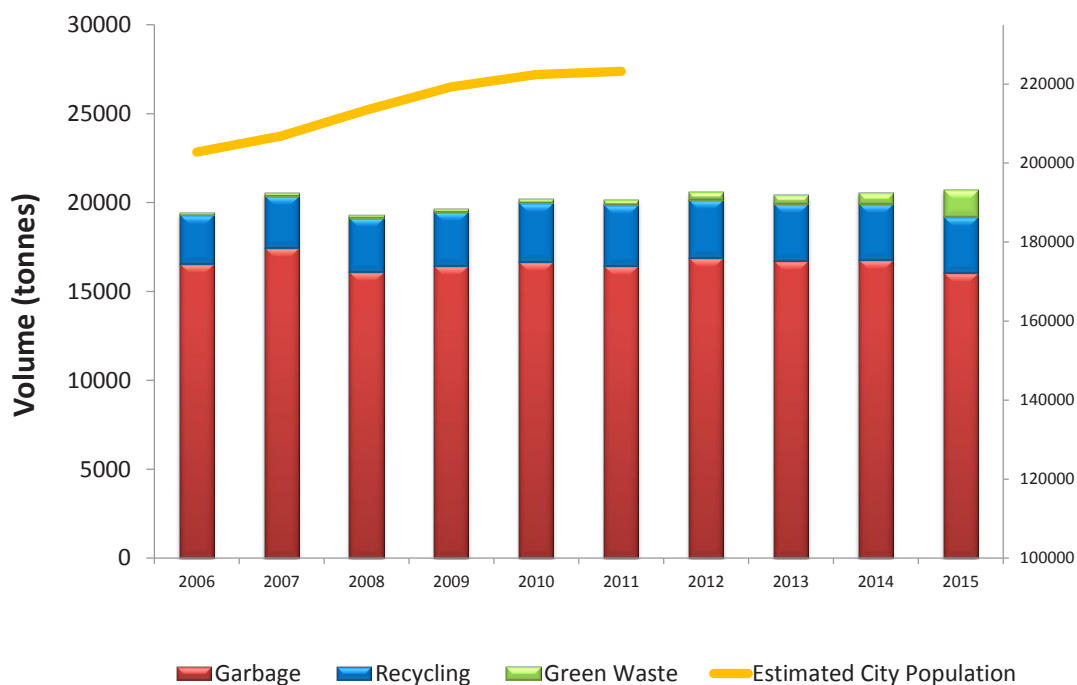
### Multi-Family and ICI (Industrial/Commercial/Institutional) Diversion

Multi-family and ICI (Industrial/Commercial/Institutional) collection services are integrated into the same routes for garbage and green waste to optimize efficiency. As of May 19, 2014, collection of recyclables for Multi-family and ICI were separated as part of the transition to the new MMBC residential recycling program. Figure 2 reflects the total amount of garbage, recycling and green waste collected for both Multi-family and ICI sectors.

In 2015, the volume of garbage was 16,049.6 tonnes (a decrease of 4.1 percent from 2014). Diversion of recyclables from multi-family and ICI sectors remained consistent, however, in 2015 green waste collected from multi-family and ICI was approximately 1,560 tonnes – a 138% increase over 2014. The increase in green waste is a reflection of the new multi-family complexes, civic facilities and public schools that implemented the program, and to those complexes, facilities and schools who have had continued success with the program.

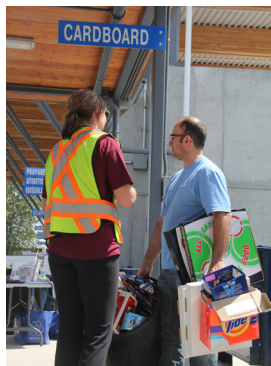


**Figure 2- Multi-Family, Industrial, Commercial and Institutional Garbage and Recycling and Green Waste Weights, 2006-2015**

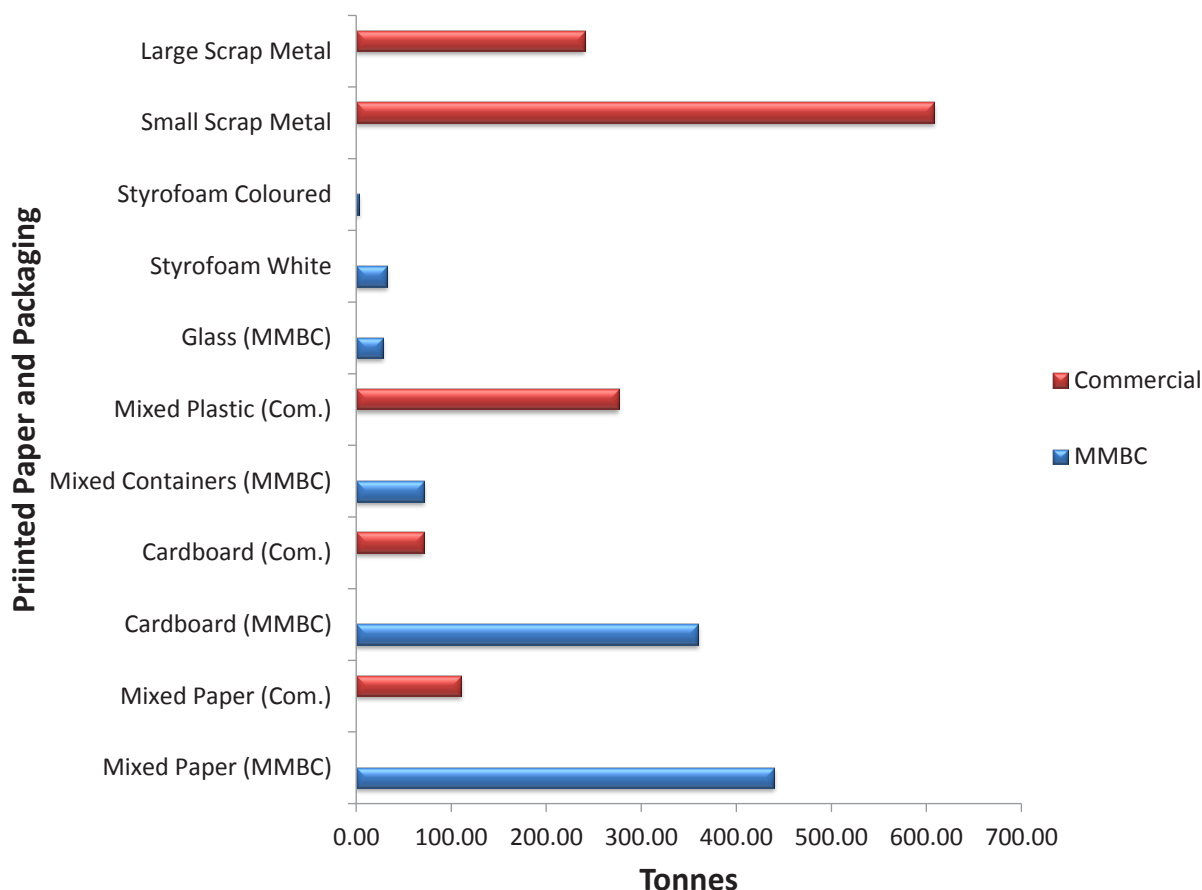


### Municipal Depot Diversion

In 2015, over 20 different types of recyclable materials were processed through the City's Eco-Centre. As of May 19, 2014, the City's Eco-Centre implemented MMBC's expanded residential recycling program. Figure 3 shows a detailed breakdown of printed paper and packaging collected through the residential MMBC Program, and the materials collected through the City's commercial and scrap metal recycling program. In 2015, the Eco-Centre diverted 2,336 tonnes of recyclables (MMBC, Commercial and scrap metal), a 31% increase over 2014.



**Figure 3 – Tonnage of Recycling Materials (MMBC and Commercial) Collected at the Eco-Centre in 2015**





In addition to residential printed paper and packaging, the City's Eco-Centre accepts other material for recycling not collected through curbside programs. Table 1 illustrates the amount of EPR and other material accepted for recycling. In 2015, the City saw an increase in the amount of household hazardous waste, such as household/vehicle batteries, used motor oil, paint, solvents and pesticides, diverted from the garbage through the Eco-Centre.

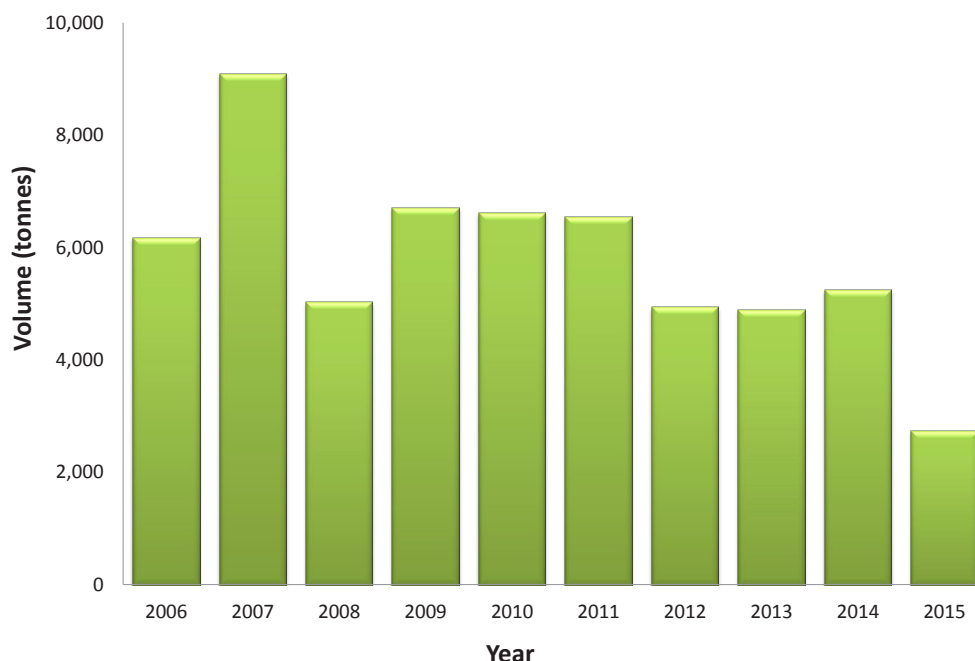
**Table 1 - Amount of EPR and Other Materials Collected in 2015**

| <b>EPR/Other Materials</b> |        |               |
|----------------------------|--------|---------------|
| Propane Tanks              | 1001   | units         |
| Used Oil                   | 66,171 | litres        |
| Car Batteries              | 1,246  | units         |
| Household Batteries        | 26     | drums         |
| Solvents                   | 22     | skids         |
| Pesticide                  | 20     | skids         |
| Paint/Aerosol              | 683    | skids         |
| Oil Filters                | 36     | drums         |
| Freon                      | 2,009  | units drained |
| Antifreeze                 | 3,300  | litres        |



In 2015, the Eco-Centre received approximately 2,729 tonnes of green waste (a 48 percent decrease over 2014) as illustrated in Figure 5. The decrease in green waste may be due to the increase in green waste collection from multi-family properties serviced by the City.

**Figure 4- Green Waste Collected at the Eco-Centre, 2006-2015**



## 4. Places

### Burnaby Eco-Centre

The City's Eco-Centre is the foundation of the City's waste diversion program as a true one-stop drop off spot for residents in Burnaby, and as a central transfer facility for recyclables and green waste collected through the City's collection programs. In 2013, the City entered into an agreement with Multi-Material BC to be a collection depot for residential packaging and printed paper, which was implemented May 2014.

Operated by City staff, the Eco-Centre has been used to showcase new recycling initiatives, such as the collection of household batteries and electronics prior to the introduction of provincial Extended Producer Responsibility (EPR) programs, and initiated pilot programs for the collection of used cooking oil and Styrofoam, both of which are now permanently accepted. In addition to blue box materials and green waste, the City has partnered with several industry stewards to allow for the collection of many materials, including household hazardous materials that are banned from disposal.

The following materials are currently accepted at no charge:

- Newspaper, magazines, mixed paper (including phone books) (EPR and Commercial non-MMBC)
- Cardboard (EPR and Commercial non-MMBC)
- Large Appliances (EPR)
- Scrap metal
- Glass jars and bottles (EPR)
- Tin and aluminium cans (EPR)
- Plastic Film (EPR)
- Plastic Hard (non-MMBC)
- Household and automotive batteries (EPR)
- Household paints, solvents, gasoline and pesticides (EPR)
- Used motor oil, oil containers and filters and antifreeze (EPR)
- Propane tanks
- Good used clothing and books (for donation)
- Styrofoam (white and coloured) (EPR)
- Used Cooking Oil

Green waste (yard trimmings) can be dropped-off at the facility for \$67/tonne. Burnaby residents with a small green waste load (100 kg or less) are allowed one visit per day at no cost. In addition to dropping off recyclables and green waste material, residents can purchase backyard



composters and rain barrels through the Eco-Centre. In 2015, 103 composters and 68 rain barrels were sold to Burnaby residents through the Eco-Centre.

### Take Back for Recycling Depots

The Province's industry-led EPR programs complement the waste disposal options provided by the City. The following materials all have accompanying EPR programs, some of which are accepted at Burnaby's centralized Eco-Centre (as mentioned above):

- Beverage containers
- Prescription and non-prescription medications
- Motor oil, filters and containers
- Antifreeze
- Paint and empty paint containers
- Automotive tires and batteries
- Flammable liquids, pesticides and gasoline
- Electronics and electrical small appliances
- Electronic toys and musical instruments
- Power tools, outdoor power equipment and exercise machines
- Household rechargeable and single-use batteries
- Cell phones
- Compact fluorescent lights, light tubes, lighting, thermostats, smoke detectors/carbon monoxide alarms
- Large Appliances

Information on drop-off locations for EPR items not accepted at Burnaby's Eco-Centre is available at: <http://www.burnaby.ca/takeback>. This website is updated frequently by City staff as EPR programs expand to capture more materials for diversion



## 5. Projects

### Multi-family Glass Separation

In 2013, the City signed onto an agreement with Multi-Material BC (MMBC) to provide recycling collection and program support to residents, and implemented the new expanded provincial recycling program as of May 19, 2014.

As a condition under MMBC, the City is required to implement separate collection for glass jars/bottles, currently captured in the mixed containers stream. The City implemented separate glass separation in Fall 2014 for single and two-family homes that included a separate grey box for glass jars/bottles, and merging newspapers and other mixed paper into one yellow bag.

In preparation for the City to expand our glass separation to our multi-family customers, the City developed new communication materials, including a resident sorting guide, updated decals and posters for complexes to utilize in their recycling rooms, and a notice regarding changes for provision to residents. In the Fall of 2015, City staff carried out delivery of Grey toters for separate glass collection, re-decating of all recycling receptacles, provision of signage and recycling guides to complexes for distribution to residents, to all multi-family complexes serviced by the City for recycling.

### Bear-resistant Green Bin Receptacles

Bear sightings and interactions have previously been reported by residents and media in some areas of Burnaby. In 2015 staff worked with the Provincial Conservation Officers to better understand the issue relating to human-bear related interactions, prepared education and outreach related materials for residents which are made available on the City's website and undertook a survey to determine actions taken by some neighbouring communities in this region regarding this issue.

In 2016 staff will seek Council approval to conduct a pilot project in select study area(s) for a period of one year to inform a resolution specific to Burnaby's servicing model. The pilot project will assist in identifying:

- effectiveness, ease of use and durability of bear resistant receptacles;
- challenges in servicing the containers;
- administrative and bylaw amendments matters which will require to be addressed; and
- required scope and scale of education/outreach program.



## 6. People

The City, in conjunction with regional and provincial governments and industry, have developed a comprehensive materials management framework to handle a medley of items, however the success of these programs depends on the users- you!

Public education and community outreach is one of the key components of our solid waste and recycling management plan. The success we have achieved on our previous waste reduction targets in the past decade is a result of public attitudes and behaviours toward recycling, reduction and composting. The education and outreach program provides the bridge between our programs and its users as we work towards the common goal of protecting the environment and preserving natural resources.

Burnaby residents are the key to Burnaby's waste reduction goal, and it is important to showcase the success of our people and what they are doing to reduce waste at home, work, school and on-the-go.

### **Burnaby School District 41 – Food Scraps Recycling Program and Green Team**

In 2011 the City of Burnaby, in partnership with the Burnaby School District (BSD), initiated a public school pilot project to investigate the feasibility of a full-scale public school food scraps collection program. The pilot project included nine schools (six elementary and 3 secondary) and was conducted over a period of eight months. Upon completion of the pilot project, the City and BSD coordinated a phased-in roll out of the food scraps recycling program, with full implementation as of 2015 to comply with Metro Vancouver's Organics Disposal Ban. It was determined that schools would join the program in 3 waves, with the first adopters being schools with a strong appetite to further the sustainable practices that were already a part of their daily routine. Program planning started in the fall of 2014 with a focus group consisting of students, parents, custodial staff, teachers, administrators, and City support staff. The group reviewed the pilot program to look at both the successes and the challenges of diversion of organics within public areas.

Lessons learned from the pilot project lead the BSD to introduce 46 litre lidded green bin receptacles on rollers to their current paper and container recycling stations. These



containers were economical, could be easily handled by BSD custodial staff, and provided the capacity required to capture the volume of daily organics generated. Through incorporating lidded containers, lined with a compostable bag, and regular cleaning, concerns and instances of odours and fruit flies were reduced significantly. To further address odour and pest concerns, particularly in schools with hot lunch programs, the BSD incorporated saw dust from the woodshop to absorb liquids and to create a layer between materials. This additional step not only reduced odours, it provided an avenue to divert a material that was being disposed of in the waste stream.

### **Creating Awareness**

The key to having an effective organics program is to create awareness of the program and change a culture of disposing everything into a singular garbage container. Introduction of student and staff green teams over the past 10 years have provided the BSD experience running very effective recycling programs to divert water bottles, pop cans, tetrapacks, paper, batteries, and e-waste from the garbage. Coupled with the knowledge that the majority of students have access to recycling at home, including the City's Green Bin program for organics, the BSD believed that the introduction of an organics program would transfer easily to students and staff.

Elementary schools were provided 3-6 green food scrap bins based on the needs of each school. The green teams took on the role of introducing the students and staff to the program using posters, visual graphics, video, and social media sites that were offered by the City and Metro



Vancouver. These hard working teams collaborated with the dedicated custodial staffs and helped to place bins in the best locations and promoted and monitored the use for several months after the rollout. The existing sustainable practices in the elementary schools made the adoption of this program run fairly smoothly.

With a secondary student population of 1,000 to 1,800, and the need for over 40 organics collection containers on average per school, the BSD took on a different approach to roll out the organics program in secondary students. The school district teamed with the non-profit organization 'Be the Change Earth Alliance', who helped to teach a group of high school leadership students how to create and deliver a campaign to bring food scrap recycling into their schools. These students were volunteers from school green teams, and also from the Burnaby Youth Sustainability Network. They worked with their sponsor teachers, administrators and custodians to determine bin locations, present at student assemblies, run lunch time recycling awareness events, and perform audits on the diversion rate of recyclables that was being accomplished at their buildings.

### Lessons Learned

A year and a half later, the BSD organics program is going strong. All schools and administrative facilities in the Burnaby School District have implemented the organics program; the district has reduced its service requirements for garbage and is looking at the next phase of their diversion and education programs. Initial apprehension and concerns connected to this program have been alleviated through operational management of the program, and through comprehensive engagement and educational campaigns.

From pilot to program, the BSD has cultured students and staff to view waste reduction and recycling as a shared responsibility. The district took an inclusive approach to program development and implementation, taking the necessary time to consult with all stakeholders, and ensure their concerns were not only heard, but addressed. Moving forward, with the support of the BSD organization and Trustees acting as champions for these programs, the BSD will continue to engage with their student body as it incorporates the passion for sustainable practices as part of their educational mandate.

If you know any organizations doing extraordinary waste management practices? Send us your story to [engineering@burnaby.ca](mailto:engineering@burnaby.ca) we would love to hear from you!





## 7. Looking Ahead 2016

The City has successfully met environmental challenges over the years through developing innovative solutions while maintaining its commitment to environmental protection. Looking ahead to 2016 brings forward enhancements to Burnaby's waste reduction programs that will further strengthen our waste reduction goals.

- Conduct a curbside collection audit and utilize audit findings to target programs to reduce contamination rates and increase participation in the green bin program;
- Completion of the green waste collection program for multi-family complexes;
- Conduct a Pilot Project for the provision of bear resistant green bins to multi-family residents impacted by human-bear interactions;
- Explore the provision of an additional seasonal leaf collection program;
- Conduct outreach to private waste haulers for increased provision of recycling and green waste collection programs;
- Conduct outreach to large businesses for the establishment of Green Waste programs;
- Expand the "I Recycle @ Work" Program to other civic facilities;
- Review the City's Bulky Item and Appliance Program and Abandoned Material service for improvement in service efficiency and enhanced education, monitoring and enforcement of abandoned materials; and
- Review options for expanding public streetscape three-compartment receptacles program in public spaces.







