

SOLID WASTE AND RECYCLING

2019 ANNUAL REPORT





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CITY OF BURNABY

Our Core Values

We embrace community, integrity, respect, innovation and passion as our core values and principles that guide our actions and decisions.

Our Vision

A world-class city committed to creating and sustaining the best quality of life for our entire community.

Goals

The City of Burnaby's Corporate Strategic Plan outlines six goals which describe the key focus areas of our work, and which help us prioritize our efforts and resources.

A Safe
Community

A Connected
Community

An Inclusive
Community

A Healthy
Community

A Dynamic
Community

A Thriving
Organization



1.0 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 from program inception year to 2019 to illustrate waste trends.

Highlights From The 2019 Work Plan Include:

- » Implemented pilot drop-off collection of "Other Flexible Plastics" at the Eco-Centre. These types of plastics represent the fastest growing plastic packaging type, and include items such as: bubble wrap, crinkly chip bags, stand-up pouches, flexible sealed packaging and woven net bags.
- » Installed measuring instruments on a Commercial truck to record the individual container weights.
- » Continued with developing Fleetmind pilot technology initiative to improve service delivery and reduce contamination.
- » Renewed a five-year contract with GFL Envirosmart to provide composting services for municipal green waste.
- » Updated the Solid Waste and Recycling Bylaw to establish a designated Bear Area with new requirements for receptacle curbside set out times to reduce the opportunity for nuisance wildlife encounters.
- » Established a program to offer residents with medical conditions that generate excessive waste an opportunity to obtain an additional garbage container at no charge.
- » Enhanced litter maintenance around warming centres and housing shelters.
- » Replaced 150 concrete litter barrels with three-stream "Silverbox" stations.
- » Hired a dedicated Environmental Services Officer to the Solid Waste and Recycling Division to enhance public education, outreach, and enforcement.
- » Amendment of Garbage Disposal Fees to include Row Houses and other properties which receive single-family style collection.
- » Completed trial of extended hours of operation at the Eco-Centre during the growing season to accommodate residential green waste drop-off.



2.0 POLICY

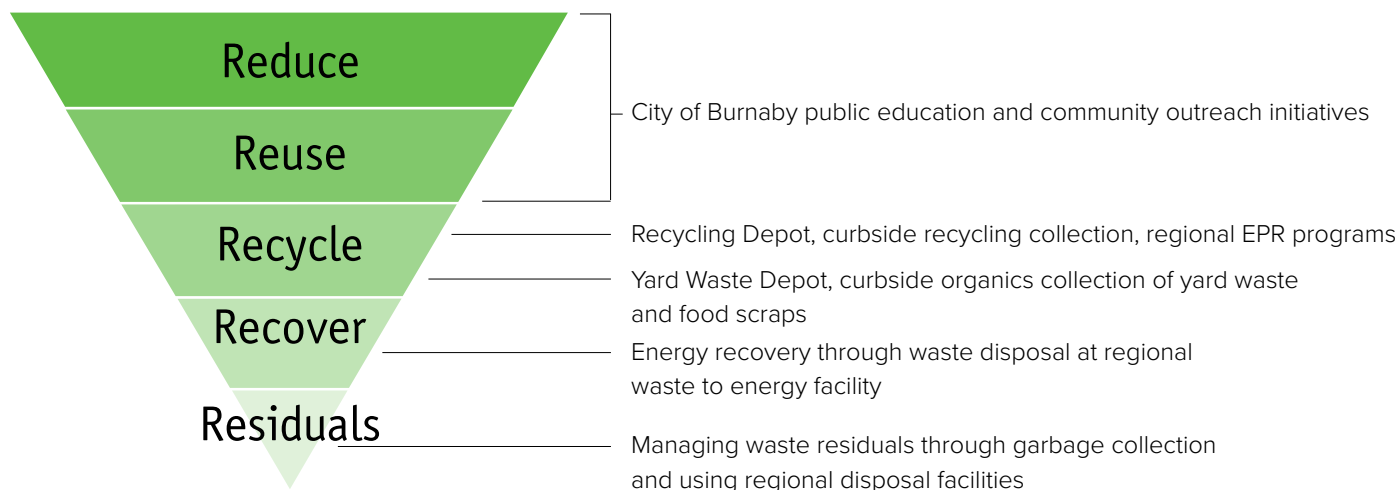
Our City is one of 21 member municipalities that coordinate with Metro Vancouver on solid waste initiatives which shape the regional waste management system. Metro Vancouver, with the participation of its member municipalities, developed the regional Integrated Solid Waste and Resource Management Plan (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. This Plan sets a target for the Metro Vancouver region to reduce the quantity of waste generated per capita within the region to 90 per cent or less of 2010 volumes by 2020. The ISWRMP details a plan to achieve this diversion and is summarized 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

The current ISWRMP has served the region well in planning and prioritizing diversion goals. Metro Vancouver has identified that in 2020, work will begin to review the current plan and provide updates to reflect the changing conditions.

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 the 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 three R'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 incinerator 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

Reducing single-use plastics was the focus of waste diversion programs at all levels of Government. In 2019, at the Federal level, the Canadian Council of Ministers of Environment (CCME) released the Canada-wide Action Plan on Zero Plastic Waste: Phase 1 to implement the Canada-wide Strategy for Zero Plastic Waste. Phase 1 of the action plan focuses on: product design, single-use plastics, collection systems, recycling capacity and domestic markets. The following priority actions for phase 1 include:

1. Extended Producer Responsibility (EPR)
2. Single-Use and Disposable Plastic Products
3. National Performance Requirements and Standards
4. Incentives for a Circular Economy
5. Infrastructure and Innovation Investments
6. Public Procurement and Green Operations

Current EPR Materials Programs

- » Electronics and electrical products (e.g. televisions, computers, small household appliances and outdoor power equipment)
- » Thermostats, smoke and carbon monoxide alarms
- » Paint, flammable liquids, gasoline and pesticides
- » Beverage containers
- » Lighting, light bulbs and tubes
- » Antifreeze, used motor oil, filters and containers
- » Medications
- » Vehicle tires
- » Outdoor power equipment
- » Large/small appliances
- » Packaging and printed paper
- » Batteries

Future EPR Materials May Include

- » Mattresses
- » Furniture
- » Textiles and carpet

In 2019, at the Provincial level, the Ministry of Environment & Climate Change Strategy has developed the Plastics Action Plan and has distributed a policy consultation paper. The Plan focuses on changing regulations in four key areas:

1. **Bans on Single-use Packaging:** Determining which types of plastics to phase out and which to keep for health, safety, and accessibility needs.
2. **Dramatically Reduce Single-use Plastic in Landfills & Waterways:** Requiring producers to take more responsibility for ensuring the plastic products they produce are recycled.
3. **Plastic Bottle and Beverage Container Returns:** Expanding the refund program to include more items such as milk containers and to increase the minimum refund to 10 cents.
4. **Reducing Plastics Overall:** Supporting effective ways to prevent plastic waste from being generated in the first place and ensuring effective re-use.

Our City works collaboratively with Metro Vancouver in advocating that the Province include additional products identified in the CCME Canada Wide Action Plan for Extended Producer Responsibility (EPR) to the Provincial Product Stewardship Program. In addition, the City is a member of the National Zero Waste Council advocating, in part, that producers take environmental consideration into product and packaging design.

Recycle BC

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. Recycle BC, an industry led and funded non-profit organization, assumed the responsibility of managing residential PPP recycling on behalf of its members as of May 2014.

In 2018, the City renewed a five-year contract with Recycle BC to receive funding for collection of residential recyclable materials.

To find drop-off locations for materials accepted through EPR programs, please visit burnaby.ca/garbageandrecycling

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 Provincial EPR programs.

The standards 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, social media channels, and the Recycle Coach Collection App.



3.0 PROGRAMS AND SERVICES

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, Eco-Centre operation, composting programs, litter pickup, large item and appliance program, abandoned material removal, waste diversion programs and related bylaw enforcement and community outreach services.

The solid waste management and recycling program integrates the principles of waste reduction, environmental preservation, public participation and worker safety in order to serve the community. In 2019, the City continued to provide a multi-sector based service to single/two family households, multi-family units and industrial/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 101 staff members and a fleet of 77 vehicles. The integrated approach has allowed the City to deliver a multi-level program, meeting the changing needs of the community.



3.1 CURBSIDE COLLECTION PROGRAM

Single, Two-Family (Duplex), and Row-House Materials Collection

Each week, collection service is provided to approximately 33,500 single and two-family households in Burnaby. A fleet of 10 automated trucks, one rear-end loading truck, and one container delivery van make up 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 trimmings (including Christmas trees), and leaf debris, is processed and turned into compost at the City-contracted facility.

The curbside 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 recycling trucks. All collected recyclable materials are consolidated at the Eco-Centre before being forwarded to Recycle BC facilities for processing.

In 2017, the City shifted to the collection of garbage every other week. This change means that garbage is collected every two weeks, while collection of blue box, grey box and yellow bag (recyclables) and green bins (food scraps and yard material) remain weekly.

Moving to Every Other Week Garbage Collection supported:

- » Increasing diversion of materials from the waste stream,
- » Provision of a consistent collection day for residents by moving from a five day per week collection system to a four day per week 'floating' collection week; and
- » Enhancements to other services, such as large item collection, public space recycling, litter and abandoned waste.



Multi-Family, Industrial, Commercial and Institutional Materials Collection

The multi-family and industrial/commercial/institutional (ICI) garbage collection service is a fully automated service that collects garbage, recycling and green waste from over 35,800 multi-family residential units, and over 460 industrial, commercial and institutional properties. The collection service utilizes jitney trucks and 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 two collection trucks that are equipped with semi-automated technology where a hydraulic lifting device at the rear of the green waste truck and on the side of the recycling trucks is used to lift and empty the receptacles.

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 have access to recycling services even if they do not subscribe to the City's collection services.

The multi-family recycling program utilizes toters provided by the City to each building complex for mixed containers, mixed paper and glass containers collection. The toters are rolled out to the curbside by building staff for weekly collection by City crews. Similar to the curbside collection program, garbage, recyclables and green waste are delivered to Metro Vancouver, Recycle BC and contracted composting facilities respectively.

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 576 in 2019.



3.2 GENERAL SERVICES PROGRAM

The General Services Program is responsible for the City's Bulky Item, Appliance, and Mattress curbside pickup program, as well as the City's Litter and Public Space Collection Program and Abandoned Waste Collection. The General Services Program utilizes two rear loaders for bulky item collection and abandoned waste collection, two 2-tonne flat deck trucks for curbside mattress and appliance collection, three split-body trucks for public space recycling and waste collection, and two small-size and two full-size pickup trucks for litter collection.



Bulky Item, Appliance and Mattress Collection

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 2019, the general services program received 8,130 service requests for bulky items (1.5 per cent decrease from 2018) and 4,042 service requests for appliance collection (3.6 per cent decrease from 2018).

As a result of a regional disposal ban on mattresses in 2011, the City collects and diverts unsoiled mattresses to a recycling facility contracted by the City. A total of 4,872 mattresses and box springs were recycled, and diverted from disposal in 2019 (2.5 per cent decrease from 2018).*

With the shift to Every Other Week Garbage Collection in 2017, the City has been able to enhance the City's Bulky Item, Appliance and Mattress Collection service and improve collection response times.

**Note: a further 219 service requests for abandoned, soiled and unrecyclable mattresses were received in 2019. These mattresses are included in the abandoned materials figures.*



Streetscape Recycling and Waste Collection

Littering is a common issue in dense, urban areas such as Burnaby. Litter on city streets and properties detracts from Burnaby's natural environment and streetscape. The City has over 380 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. The litter collection fleet empties the receptacles on a regular basis and picks up litter on the streets and boulevards.

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 2018 (now Creative Outdoor Advertising), 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 came at no additional cost to the City with Creative Outdoor supplying and maintaining the bins. In return, Creative Outdoor Advertising 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.

The City continued to exchange their inventory of single-stream garbage receptacles with three-stream "Silverbox" receptacles. This past year, another 150 three-stream units were installed in addition to the 200 units already in the system.

In 2019, 161,680 kg of waste was collected throughout the entire network. Unfortunately, the streetscape recycling diversion rate remains very low. Recyclable materials are too often contaminated with liquids and food waste to be accepted in the program. The City is working with Recycle BC to improve the performance of the streetscape receptacles. Consideration is being given to improve public awareness through signage and marking while also exploring options to improve material sorting.

Abandoned Material Service

Larger abandoned items such as old mattresses, chesterfields, and appliances are often found on the roadside. Abandoned items are generally picked up by a rear-loader truck dispatched as these items are observed by staff or in response to complaints from residents. In 2019, the City received 3,082 (15 per cent decrease from 2018) service requests for abandoned items, general litter and illegal dumping of drywall. Crews responded to an additional eight special clean-up events (a reduction from 2018) for large encampments. Burnaby residents can report abandoned materials by contacting the Burnaby Solid Waste and Recycling Division.



3.3 PUBLIC DROP-OFF FACILITIES

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 2018, the City renewed its five-year agreement with Recycle BC to be a collection depot for residential packaging and printed paper.

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.

This year, the City began accepting drop-off collection of Other Flexible Plastics at the Eco-Centre. These types of plastics represent the fastest growing plastic packaging type, and include items such as: bubble wrap, crinkly chip bags, stand-up pouches, flexible sealed packaging and woven net bags.

Green waste (yard trimmings) can be dropped-off at the facility for \$100/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 2019, 48 composters and 15 rain barrels were sold to Burnaby residents through the Eco-Centre.

Following Materials Currently Accepted At No Charge:

- » Newspaper, magazines, mixed paper (including phone books) (EPR and Commercial non-Recycle BC)
- » Cardboard (EPR and Commercial non-Recycle BC)
- » Large appliances (EPR)
- » Scrap metal
- » Glass jars and bottles (EPR)
- » Tin and aluminum cans (EPR)
- » Plastic film (EPR)
- » Other Flexible Plastic Packaging (EPR)
- » Hard plastic (non-Recycle BC)
- » 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
- » Cell phones

Information on drop-off locations for EPR items not accepted at Burnaby's Eco-Centre is available through the City's online 'What Goes Where?' searchable database:

burnaby.ca/garbageandrecycling



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:

- » Beverage containers
- » Prescription and non-prescription medications
- » Packaging and printed paper*
- » Motor oil, filters and containers*
- » Antifreeze*
- » Paint and empty paint containers*
- » Automotive tires and batteries* (Batteries only)
- » 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*

* Accepted at City of Burnaby Eco-Centre





3.4 CORPORATE DIVERSION PROGRAMS

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. The City launched a civic facility waste reduction program for both front-of-house and back-of-house in 2013, which includes the separate collection of mixed paper, mixed containers, and food-soiled paper products. Since implementation, civic facilities such as Burnaby City Hall, West Building, Recreational Facilities, Fire Halls, and the RCMP Detachment have programs in place. The program was expanded to public libraries, the Burnaby Art Gallery and Shadbolt Centre for the Arts in 2019.

The City's civic facilities have largely eliminated single use plastic bags, straws and utensils. Initiatives continue to be undertaken to phase out single use containers and introduce paper or compostable alternatives as these products become available.



City of Burnaby “Green Team”

The City’s internal Green Team is made up of staff from various departments 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.



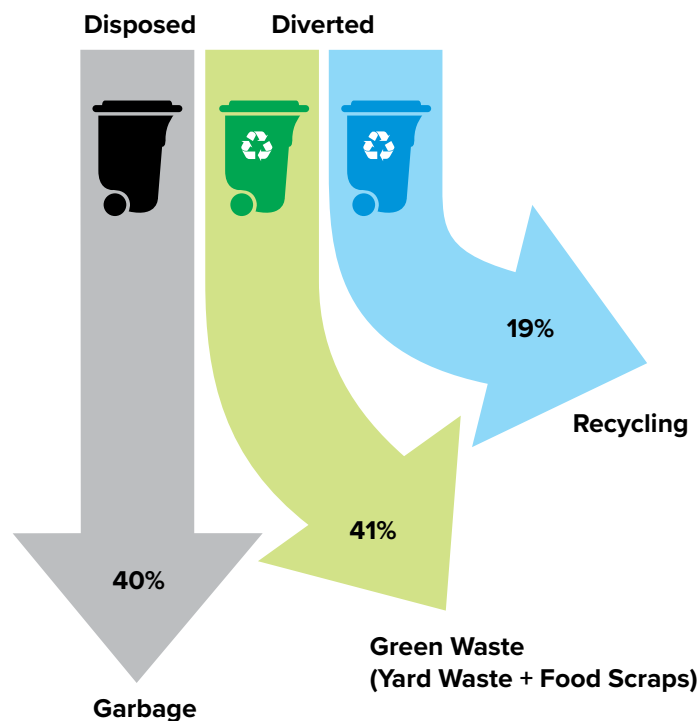
4.0 PERFORMANCE

The City collected approximately 66,724 tonnes of garbage, green waste and recyclables that were generated by Burnaby residents and businesses in 2019. The diagram to the right illustrates the disposal versus diversion rates. In addition to aspiring to new levels of waste reduction and diversion, the City is committed to providing residents with an efficient and sustainable waste management service.

For the first time, green waste eclipsed garbage waste as the largest component of the waste stream. The City's overall diversion rate remained constant at around 60 per cent.

2019 Breakdown of Disposal/Diversion Achieved by the City System

(Single-Family, Multi-Family and Industrial/Commercial/Institutional)





4.1 SINGLE FAMILY DIVERSION

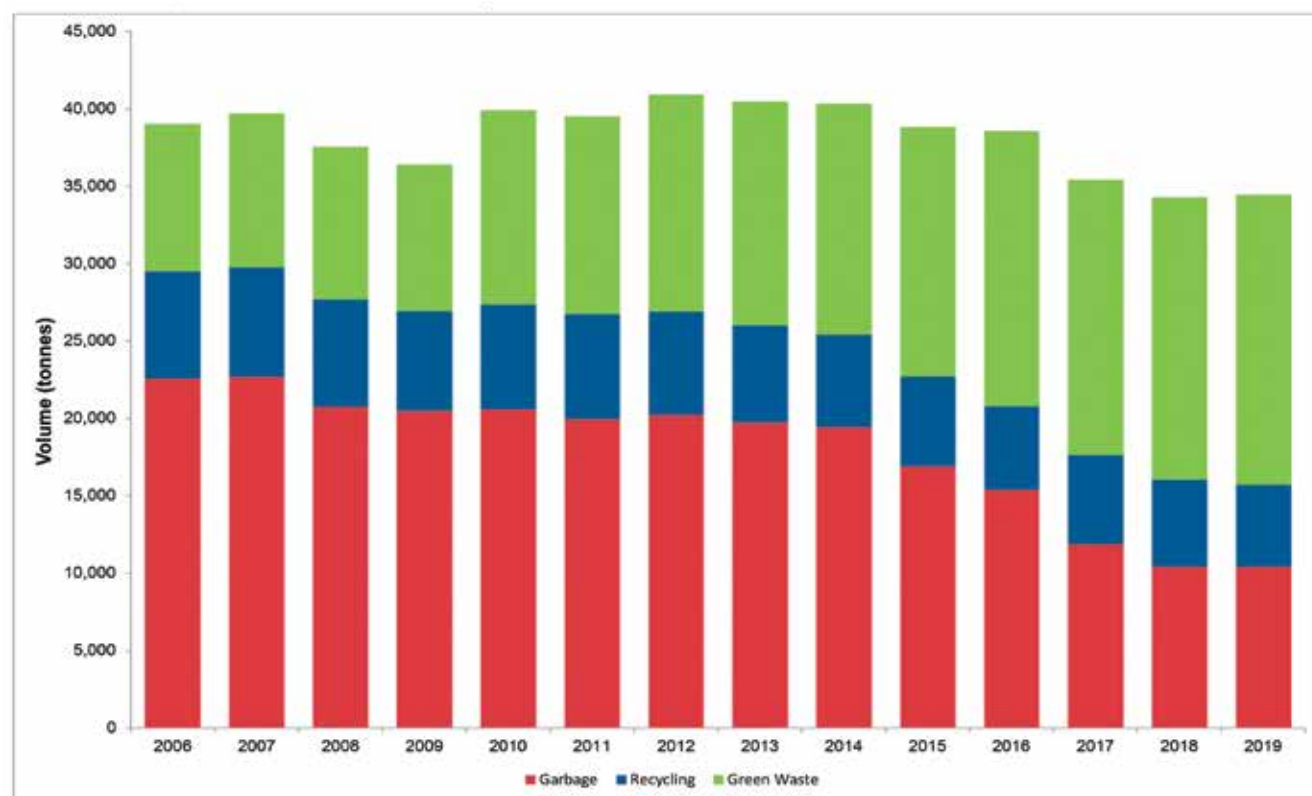
Prior to the introduction of recycling and green waste diversion programs, the annual volume of single family garbage collected was approximately 40,000 tonnes. Figure 1 reflects the total amount of garbage, recycling and green waste collected for single family properties.

In 2019, the volume of garbage collected was consistent at 10,430 tonnes (10,423 tonnes in 2018) — a reduction of approximately 73 per cent of the 1989 level. Diversion of recyclable materials decreased by 5 per cent in 2019 as 5,326 tonnes of materials were collected. The City experienced another year of increase in green waste, with 18,703 tonnes collected (a 7 per cent increase over 2018).

Figure 1 – Single Family Curbside Garbage, Recycling and Green Waste Weights, 2006-2019

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

**As of April 2017, Garbage Collection moved to bi-weekly; Green Waste and Recycling remained weekly.*



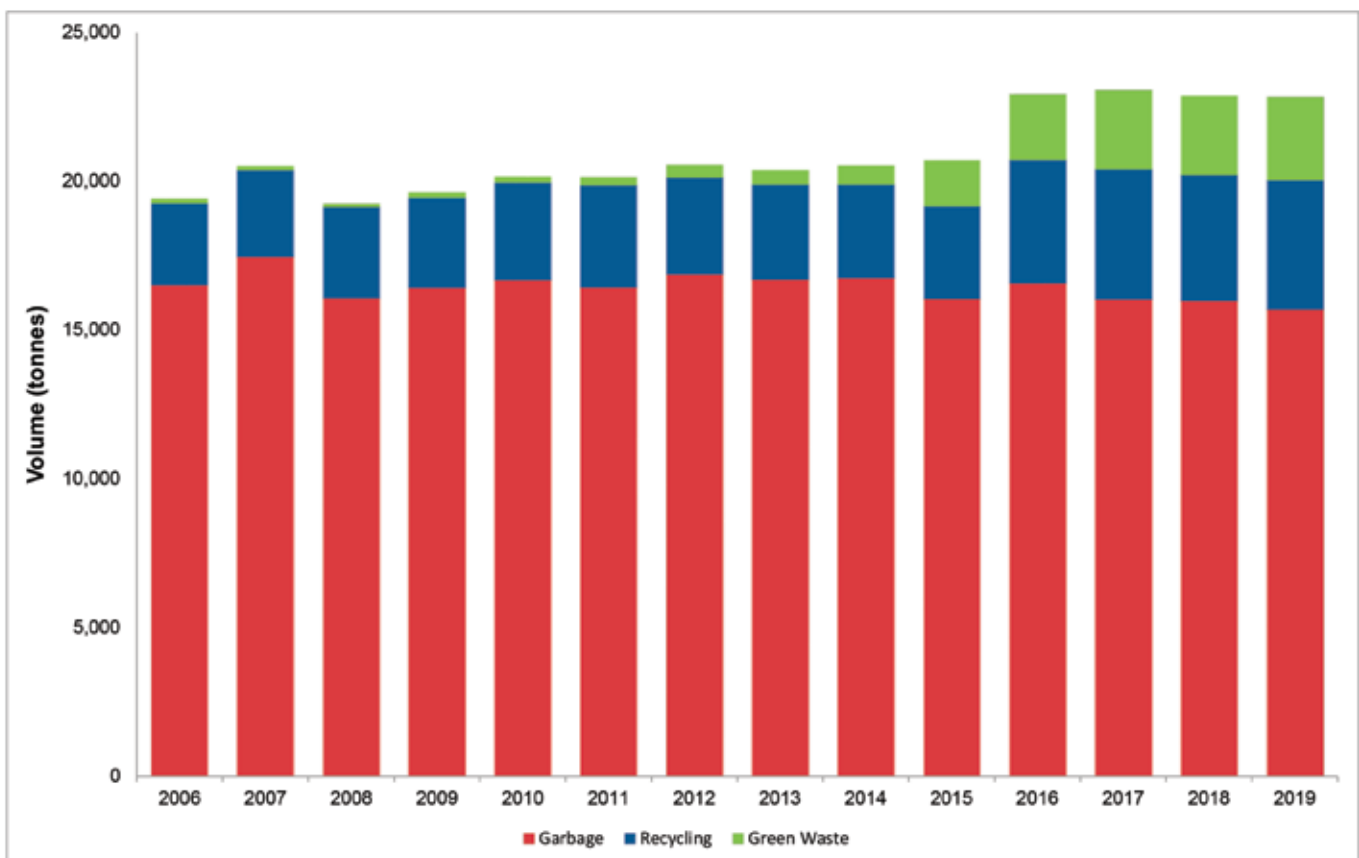


4.2 MULTI-FAMILY AND ICI (INDUSTRIAL/COMMERCIAL/INSTITUTIONAL) DIVERSION

In 2014, collection of recyclables for multi-family and ICI were separated as part of the transition to the Recycle BC residential recycling program. Figure 2 reflects the total amount of garbage, recycling and green waste collected for both multi-family and ICI sectors.

In 2019, the volume of garbage was 15,688 tonnes (a decrease of 1.9 per cent from 2018). Diversion of recyclables increased by 2.9 per cent over 2018, with 4,352 tonnes collected in 2019. Green waste diversion increased by 2.9 per cent over 2018 with 2,981 tonnes collected in 2019.

Figure 2 – Multi-family, Industrial, Commercial and Institutional Garbage, Recycling and Green Waste Weights, 2006-2019 *As of June 2010, Green Waste = Yard Waste + Food Scraps.

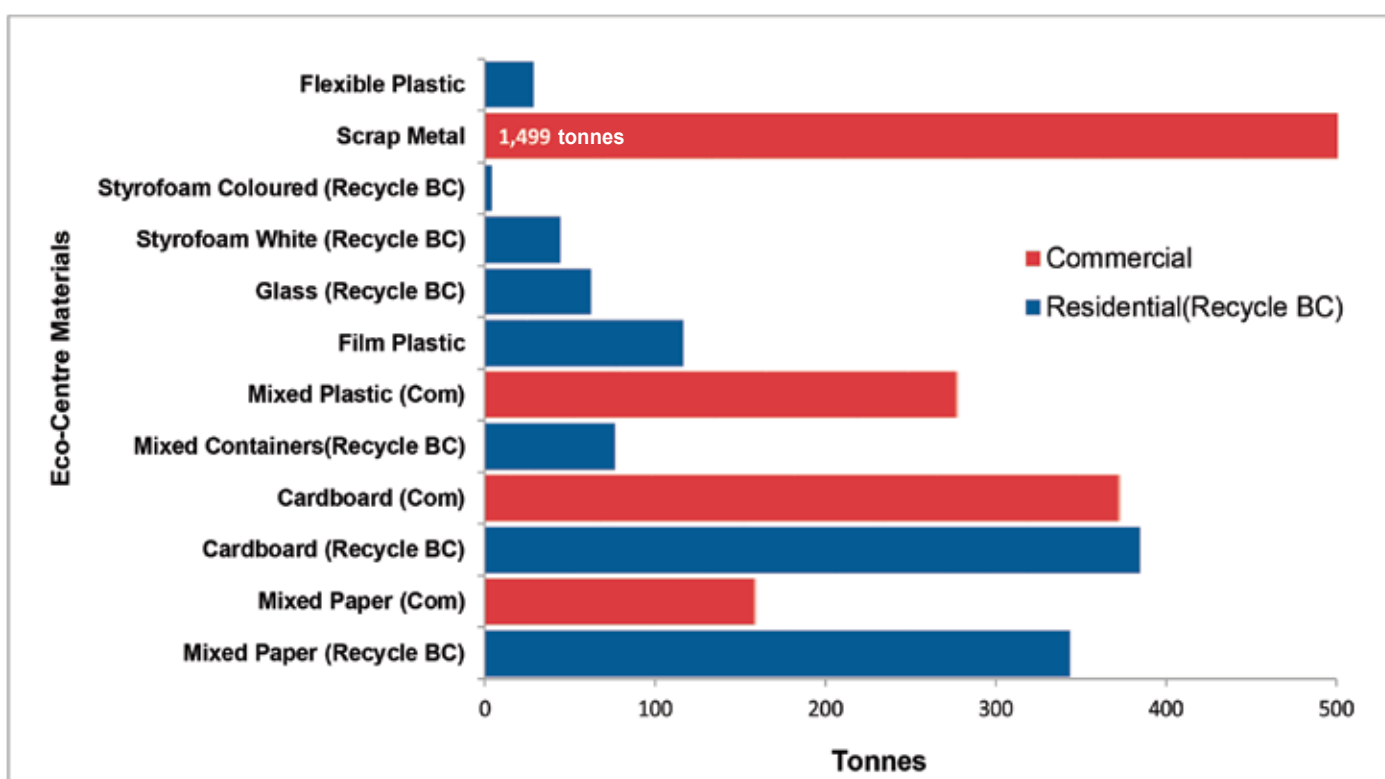




4.3 MUNICIPAL ECO-CENTRE DIVERSION

In 2019, over 22 different types of recyclable materials were processed through the City's Eco-Centre. Since May 2014, the City's Eco-Centre implemented Recycle BC's expanded residential recycling program. Figure 3 shows a detailed breakdown of printed paper and packaging collected through the residential Recycle BC Program, and the materials collected through the City's commercial and scrap metal recycling program. In 2019, the Eco-Centre diverted 3,338 tonnes of recyclables (Recycle BC, commercial, scrap metal and select EPR programs), a 9 per cent increase from 2018.

Figure 3 – Tonnage of Recycling Materials Collected at the Eco-Centre for Recycle BC, Commercial and Scrap Metal in 2019





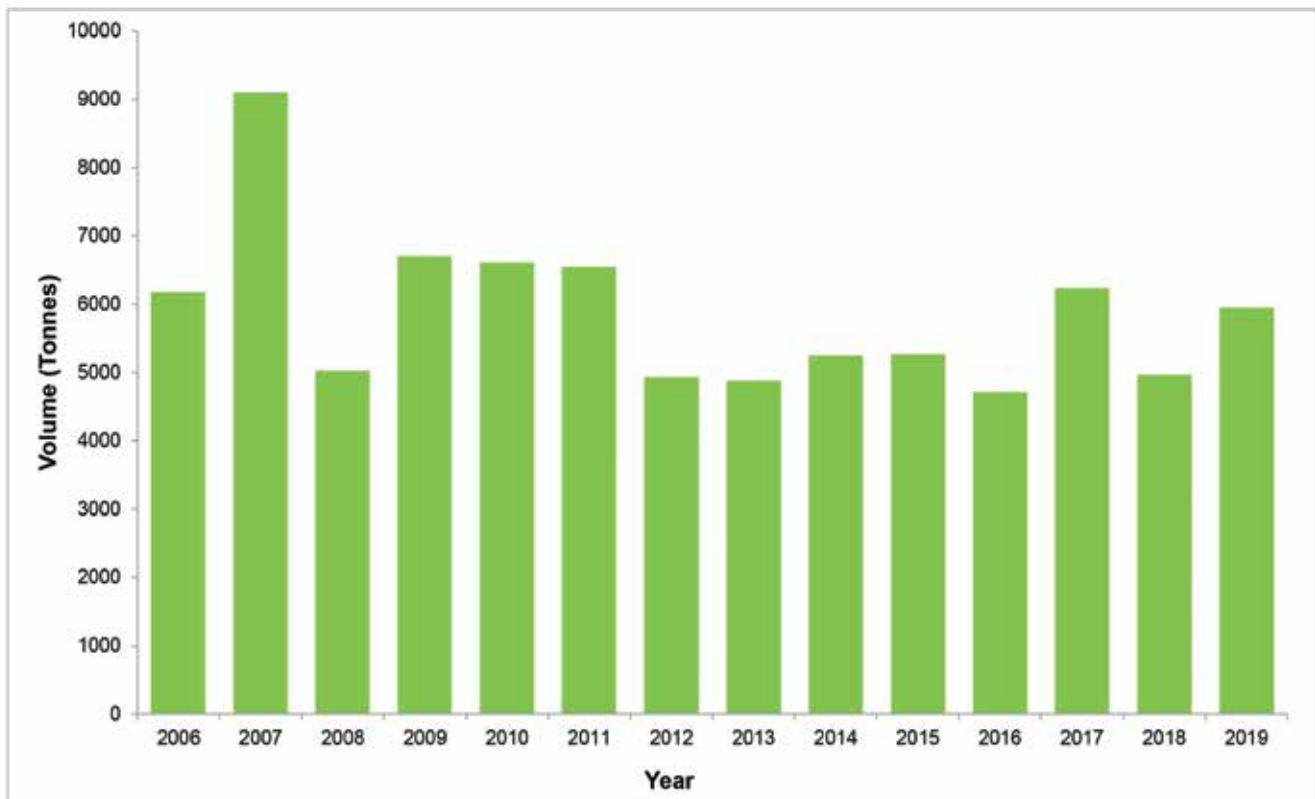
In addition to residential printed paper and packaging, the City's Eco-Centre accepts other material for recycling not collected through curbside programs. Table 1 illustrates the amount of EPR and other material accepted for recycling. In 2019, the City saw an increase in the amount of household hazardous waste, such as household/vehicle batteries, used motor oil, paint, solvents and antifreeze, diverted from the garbage through the Eco-Centre.

Table 1 – Amount of EPR and Other Materials Collected at the Eco-Centre in 2019

EPR/Other Materials	
Propane Tanks	1,121 units
Used Oil	135,924 litres
Car Batteries	1,806 units
Household Batteries	37 drums
Solvents	58 skids
Pesticide	22 skids
Paint/Aerosol	561 skids
Oil Filters/Containers	75 drums
Freon Containing Appliances	2,910 units drained
Antifreeze	7,666 litres

In 2019, the Eco-Centre received approximately 5,951 tonnes of green waste (a 20 per cent increase over 2018) as illustrated in Figure 4.

Figure 4 – Green Waste Collected at the Eco-Centre, 2006-2019





5.0 PROJECT AND BYLAW AMENDMENTS

Bear-resistant Green Bin Receptacles

Bear sightings and interactions have previously been reported by residents and media. In 2015, staff worked with the Provincial Conservation Officers to better understand the issues relating to human-bear related interactions. In 2016, the City undertook a year-long bear-resistant green bin pilot project to assist the City in identifying: effectiveness, ease of use and durability of bear resistant receptacles; challenges in servicing the containers; any administrative and bylaw amendments; and required scope and scale of education/outreach programs.

In 2019, the City continued to expand the deployment of bear-resistant green bins to additional multi-family complexes in the Forest Grove and Cariboo Heights areas. The bear-resistant green bins continue to remain a component in the management of nuisance wildlife encounters. The requirement to additionally manage wildlife attractants in bear areas was further explored in 2019. Particular attention was given to the storage of green waste bins in bear-resistant enclosures. In addition, the benefits of adjusting the allowable times during which the green bins were removed from the enclosures and placed curbside was further explored to reduce the level of attractants.



Solid Waste and Recycling Bylaw Amendments

City Council approved multiple changes to the Solid Waste and Recycling Bylaw in 2019.

1. Stricter requirements and clarified language for litter and abandoned waste
2. New requirements for providing information and signage to encourage proper separation and sorting of garbage and recyclable materials to new and existing residents within multi-family properties
3. New requirements for bulky item management within multi-family properties
4. Designation of Bear Areas
5. Inclusion of Row-housing to single-family collection fee schedule





6.0 PUBLIC OUTREACH AND EDUCATION PROGRAMS

Waste Collection App

Residents of single- and two-family homes can avoid missing a collection day by downloading Burnaby’s free waste collection app, Recycle Coach. With the app, residents can set up reminders and get instant access to their garbage, recycling and green bin collection information. The app is updated when needed so the information is always current. In addition to access to information, the app allows the City to directly update acceptable materials, add images and sort requirements. It also has the capability for linkage to social media. Collection app features include:

- » Collection day reminders for residential curbside collection schedules, including alerts for holiday schedule changes and weather disruptions;
- » Notifications about special events such as Christmas tree collection and reminders about lawn watering restrictions;
- » 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; and
- » “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. In 2019, the number of residents actively using the collection app was 73,359 (a 3.7 per cent increase from 2018), with the total of 899,046 resident interactions (a 6 per cent increase from 2018). Since the integration of the Collection App into the City’s website in 2017, the number of visitors accessing the website plugin has increased (34,259, 39,798 and 35,493 in 2017, 2018 and 2019 respectively). Table 2 outlines the types of resident interactions that were observed in 2019 for the collection app and the online website plugin.

Table 2 – Number of Resident Interactions from the City’s Collection App and Website Plugin in 2019

Reminders Sent (e.g. collection reminders)	694,370	7% increase over 2018
Problem Reports Received (e.g. missed collection, illegal dumping)	459	20% decrease over 2018
Content Page Views (e.g. sorting pages, drop-off depot locations)	104,076	16% decrease over 2018
PDF Calendar Views (e.g. view personal collection calendar)	30,889	32% decrease over 2018
Exported Personal Calendars (e.g. printed personal collection calendar)	69,169	22% decrease over 2018



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 2019, City staff participated in numerous 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 seek answers to their questions and clarification on new programs and services offered. Some examples of events attended were: Great Salmon Send Off, Hats Off Day, Eco-Centre Open House, Edmonds Community Fair, Burnaby Blooms and Willingdon Centre Community Fair.

In addition to community events, the City takes part in seasonal outreach campaigns. In 2019, 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.



7.0 LOOKING AHEAD TO 2020

The City has successfully met environmental challenges over the years through developing innovative solutions while maintaining its commitment to environmental protection. Looking ahead to 2020 brings forward enhancements to Burnaby's waste reduction programs that will further strengthen our waste reduction goals.

- » Conduct a feasibility assessment of a city-owned green waste processing facility to evaluate opportunities to reduce the current contracted material recycling fees, reduce loading, transporting and consolidating requirements, and to participate in district energy opportunities. This assessment will consider reductions in G.H.G. emissions through shortened haul distances, operating efficiencies, and heating requirements.
- » Undertake a pilot project for the diversion of waste from Demolition and Land Clearing (DLC) activities from residential, commercial and institutional facilities.
- » Conduct a waste composition audit and utilize findings to set priorities for contamination and diversion programs.
- » Deploy additional streetscape receptacles in areas experiencing litter issues.
- » Participate in Recycle BC's review of the streetscape recycling program to enhance diversion opportunities.
- » Explore options for reducing contamination in the multi-family recycling and green bin programs.
- » Continue the roll out of the City's green bin program to the remaining multi-family complexes and civic facilities.
- » Enhance the Bulky Item, Appliance and Mattress collection programs to reduce the length of time items are placed curbside.
- » Research opportunities to enhance seasonal green waste collection (e.g. extra leaf collection pilot program).
- » Continue targeted outreach and education programs on diversion and waste reduction (i.e. engage coffee shops and fast-food establishments to consider areas for improvement).
- » Review the designated Bear Area and associated enclosure requirements to evaluate the level of deterrence required.
- » Develop mobile camera technology to be deployed in areas where abandoned waste is commonly observed to deter illegal dumping activity.
- » Work with the Corporate Communications and Marketing team to improve communication for Solid Waste & Recycling programs and services across all media platforms.



