

SOLID WASTE AND RECYCLING

2020 ANNUAL REPORT





TABLE OF CONTENTS

1.0 Introduction and Highlights	4
2.0 Policy	5
3.0 Programs and Services	7
3.1 Curbside Collection Program	8
3.2 General Services Program	10
3.3 Public Drop-Off Facilities	12
4.0 Performance	14
4.1 Single Family Diversion	15
4.2 Multi-Family and ICI (Industrial/Commercial/Institutional) Diversion	16
4.3 Municipal Eco-Centre Diversion	17
5.0 Projects	19
6.0 Public Outreach and Education Programs	20
Waste Collection App.....	20
7.0 Looking Ahead to 2021	22

Figures and Tables

Figure 1 – Single Family Curbside Garbage, Recycling and Green Waste Weights, 2006-2020	15
Figure 2 – Multi-family, Industrial, Commercial and Institutional Garbage, Recycling and Green Waste Weights, 2006-2020	16
Figure 3 – Tonnage of Recycling Materials Collected at the Eco-Centre for Recycle BC, Commercial and Scrap Metal in 2020	17
Figure 4 – Green Waste Collected at the Eco-Centre, 2006-2020	18
Table 1 – Amount of EPR and Other Materials Collected at the Eco-Centre in 2020	18
Table 2 – Number of Resident Interactions from the City's Collection App and Website Plugin in 2020	20

CITY OF BURNABY

Our Vision

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

Our Core Values

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

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

2020 was a unique year due to the Covid-19 pandemic. As an essential service, Solid Waste & Recycling programs continued to be delivered with minimal impacts to staffing levels, curbside collection services and Eco-Centre operations. In addition to the health and safety challenges brought on by Covid-19, unprecedented volumes of solid waste and recycling material were collected. The data collected from 2020 may be illustrating waste trends that were accelerated by the pandemic but our assumptions are anecdotal at this time. With an emphasis on providing Burnaby residents and businesses with consistent programs and services throughout the pandemic, City of Burnaby also maintained strong waste diversion results and continued to seek opportunities to improve waste management 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 2020 to illustrate waste trends.

Highlights From The 2020 Work Plan Include:

- » Developed a program to recycle wet and soiled mattresses. Within half a year of operation, over 4,200 additional mattresses were recycled in 2020. This represents a diversion of approximately 105 tonnes from the waste stream.
- » Received two depot awards for our clothing donation collection and household battery recycling programs as over 13 tonnes of batteries were recycled at the Eco-Centre.
- » Collection crews began directly hauling curbside recyclable materials to a receiving facility in Richmond, thus eliminating the need to double handle the material at the Eco-Centre before transfer.
- » Completed renovations at the Eco-Centre to enhance vehicular traffic flow and pedestrian circulation within the facility.
- » Worked with a vendor to develop a program which safely removes any remaining propane and butane from 1 lb containers at the Eco-Centre to facilitate metal recycling.
- » Enhanced wildlife protection by expanding the Bear Area to include neighbourhoods in South Burnaby near Robert Burnaby Park and Deer Lake Park.
- » Added the first electric vehicle to our division which also happens to be the first electric vehicle in the Engineering Department.
- » Completed Phase 1 of a feasibility study for a City-owned green waste processing facility.



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. The Plan sets two ambitious targets for the Metro Vancouver region:

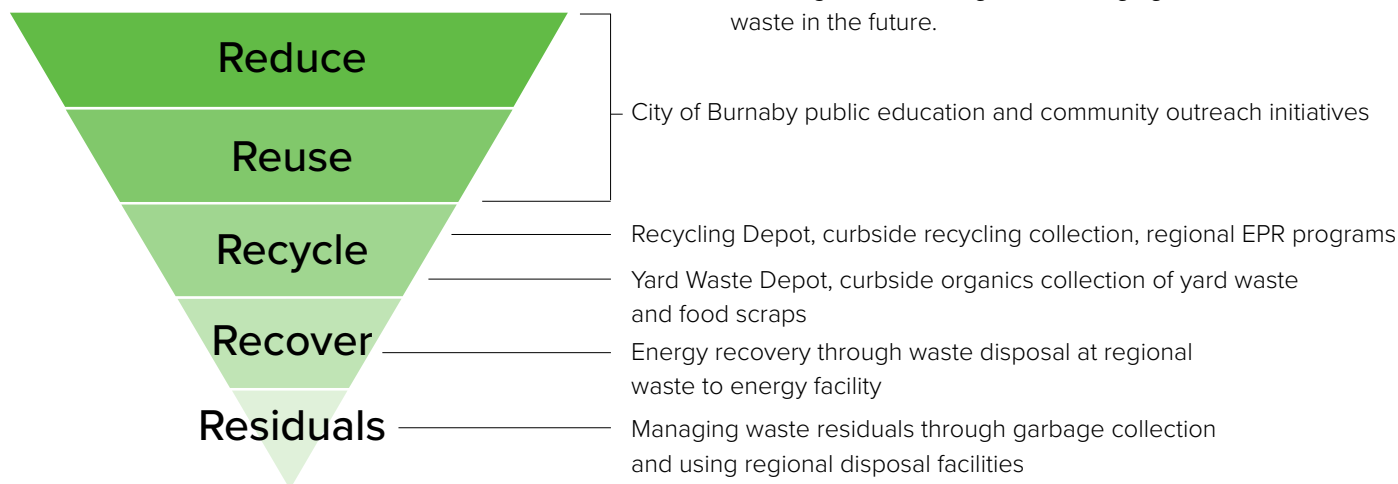
- 1) to reduce the quantity of waste generated per capita within the region to 90% or less of 2010 volumes by 2020
- 2) to achieve 80% regional waste diversion rates by 2020.

Although the 80% diversion rate is seen as an aspirational target, the ISWRMP details a plan to achieve the targets and is summarised in the four 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. In 2020, Metro Vancouver began work on reviewing the current plan and providing 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 3 Rs 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 Extended 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 5 Rs with emphasis on **reducing** waste in the goal of managing less **residual** waste in the future.



Integration with Federal and Provincial Initiatives

Green waste recycling and reducing the use of single-use plastics were the focus of waste diversion programs at all levels of government.

On a national level, progress towards reducing plastics in the environment and fostering a circular economy was advanced in 2020 with the announcement of Phase 2 of the Canada-wide Action Plan on Zero Waste Plastic by Canadian Council of Ministers of Environment. This federal level initiative targets the remaining areas of the overall Strategy to:

- » Improve consumer, business and institutional awareness to prevent and manage plastic waste responsibly
- » Reduce plastic waste and pollution generated by aquatic activities
- » Advance plastics science to inform decision-making and measure performance over time
- » Address plastics in the environment through capture and clean-up
- » Contribute to global action on plastic pollution reduction

With these goals in mind, six priority actions were identified in this next Phase:

1. Information exchange and awareness
2. Management of waste from aquatic activities
3. Fishing and aquaculture
4. Capture and clean-up
5. Research
6. Global leadership

Provincially, the Ministry of Environment & Climate Change Strategy continued to work on the Clean BC Action Plan. Highlights from 2020 include:

1. New programs to keep organic waste out of landfills
2. Release of the 2019 Climate Change Accountability Report
3. Funding security for the Clean BC program
4. Funding for the Clean Coast, Clean Waters Initiatives
5. Approval of Local Government environmental protection bylaws
6. Increase in the number of single-use plastic items included in residential recycling program
7. Adding milk containers to the deposit and refund program

At the Regional level, our City works collaboratively with Metro Vancouver in advocating the Province to 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, producers to take environmental consideration into product and packaging design.

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
- » Propane and butane bottles

Recycle BC

The BC 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 2020, Recycle BC began partnering with a new Post Collection Service Provider – GFL Environmental Ltd. Under this new arrangement, the Post Collection Service Provider has become increasingly responsible for the end-of-life fate of the recyclable materials collected. The goal of this change is to ultimately facilitate the development of new material markets and recycling opportunities to increase diversion.

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. In 2020, Metro Vancouver installed a system of remote cameras to monitor the waste stream for banned materials. The program has been very successful in identifying the presence of such materials.

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 2020, 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 provide are made possible by a team of approximately 114 staff members and a fleet of 78 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 Family, Two-Family (Duplex), and Row-House Materials Collection

Each week, collection service is provided to approximately 33,700 single family, two-family and row 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. In May of 2020, collection crews began to directly haul the collected recyclable to a designated receiving facility in Richmond, BC. These revised procedures were the result of new product end-of-life processing arrangements between Recycle BC and their selected vendor (GFL Environmental Inc).

The City continues to collect garbage every other week while recycling and green waste are collected weekly. This schedule continues to support our environmental and operational goals.

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 39,095 multi-family residential units, and 505 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 requires 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. The multi-family recycling program utilizes carts provided by the City to each building complex for mixed containers, mixed paper and glass containers collection. The carts 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 585 in 2020 and continues to be a priority program for public education and outreach.



3.2 GENERAL SERVICES PROGRAM

The General Services Program is responsible for the City's Large Item & Appliance 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, two small-size and two full-size pickup trucks for litter collection.



Large Item & Appliance Collection Service

In addition to the weekly garbage, recycling and green waste collection services, special pickups can be requested by residents for large items such as mattresses, appliances, chesterfields, etc., a service that is valued by many residents.

As a result of a regional disposal ban on mattresses in 2011, the City collects and diverts all mattresses to recycling facilities contracted by the City. Previously, only fully wrapped mattresses were accepted for recycling but in 2020, the City contracted an additional facility to receive wet and soiled mattresses as well. In 2020, a total of 9,180 mattresses and box springs were recycled and diverted from disposal. This change has facilitated an 88% increase in the number of mattresses recycled. Additionally, the general services program received 9,644 service requests for large items (18.6% increase from 2019) and 5,394 service requests for appliance collection (29% increase from 2019).

Previously, requests for Large Item & Appliance pickup were submitted through phone calls and emails. Due to the growing popularity of the program, the City launched an online request form in October 2020. From October to December 2020 over 1,500 online service requests were received.



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 428 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 2010 (now Creative Outdoor Advertising), who supplied the City with three-stream receptacles—one for waste, one for paper recycling and one for container recycling. The project came at no additional cost to the City with Creative Outdoor Advertising 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 the total 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 20 three-stream units were installed for a total of 355 units throughout the City.

In 2020, 177 tonnes of waste was collected throughout the entire network. Historically, the streetscape recycling diversion rate has been poor (less than 15%). Recyclable

materials are too often contaminated with liquids and food waste to be accepted in the program. To improve the performance of the 3-stream receptacles, 20 silverboxes received updated decals that are consistent with the curbside recycling colours and icons. Additionally, 30 silverboxes received City of Burnaby branded posters that support our Climate Action Framework by emphasizing the “Reduce, Reuse, Recycle” message.

Abandoned Material Service

Larger items such as old mattresses, chesterfields and appliances are often found abandoned 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 2020, the City received 3,389 (10% increase from 2019) service requests for abandoned items, general litter and illegal dumping of drywall. Crews responded to an additional 10 special clean-up events (25% increase from 2019) for large encampments.

In an effort to combat illegal dumping to Burnaby streets and lanes, residents in neighborhoods that historically experience a high frequency of dumping activity received an informative letter about the Large Item & Appliance Program and were encouraged to report abandoned materials in their area. In 2020, the City proactively sent 2,697 information letters to residents in such areas which may have contributed to the dramatic increase of requests for large item & appliance pickup and/or reports for illegal dumping.



3.3 PUBLIC DROP-OFF FACILITIES

Burnaby Eco-Centre

The Burnaby 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 green waste collected by the City.

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 2020, the facility was twice recognized as a leader amongst recycling depots in the province for the volume of clothing donation items collected and household batteries recycled.

The City continues to pilot with Recycle BC on the 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.

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 the Burnaby 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 the Burnaby Eco-Centre





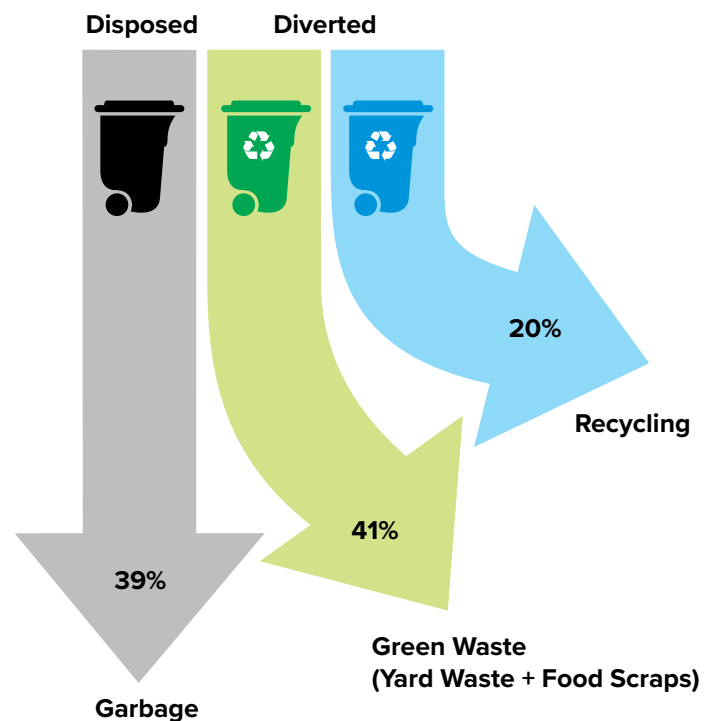
4.0 PERFORMANCE

City services collected approximately 74,782 tonnes of garbage, green waste and recyclables that was generated by Burnaby residents and businesses in 2020. This total represents an impressive 12% (8,058 tonnes) increase from the previous year. It is believed that as a result of pandemic response protocols and the corresponding increase in the number of residents working from home, the City's share of the region's collection profile has shifted. As restrictions are lifted, waste and recycling generation rates will be monitored to forecast potential future trends.

The diagram 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. Green waste continues to overtake garbage as the largest component of the waste stream. The City's overall diversion rate increased slightly to 61%.

2020 Breakdown of Disposal/Diversion Achieved by the City System

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





4.1 SINGLE FAMILY DIVERSION

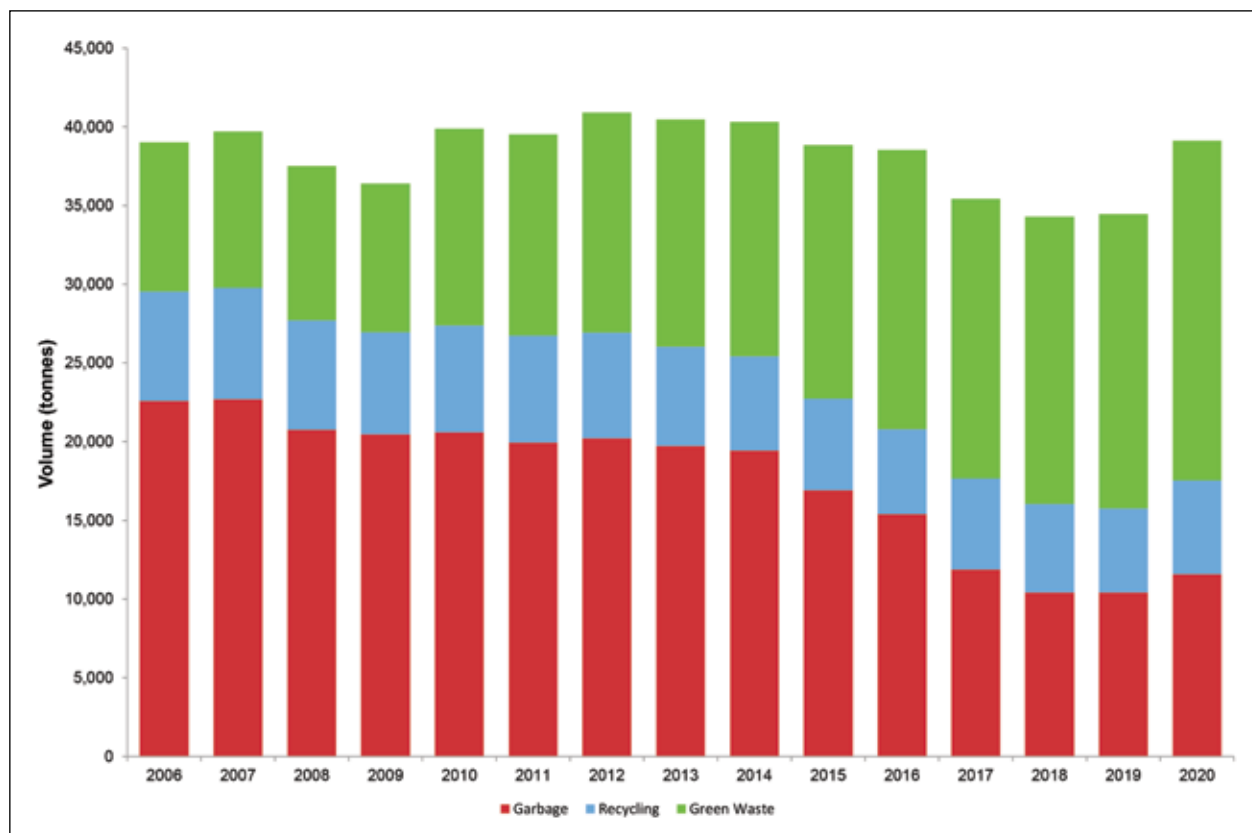
Prior to the introduction of recycling and green waste diversion programs, the annual volume of single family garbage collected was approximately 40,000 tonnes. Figure 1 reflects the total amount of garbage, recycling and green waste collected for single family properties.

In 2020, green waste collection increased substantially to 21,583 tonnes collected (a 15% increase over 2019). The volume of garbage collected also increased 11% to 11,591 tonnes. Lastly, diversion of recyclable materials increased 12% as 5,947 tonnes of materials was collected.

Figure 1 – Single Family Curbside Garbage, Recycling and Green Waste Weights, 2006-2020

**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.*

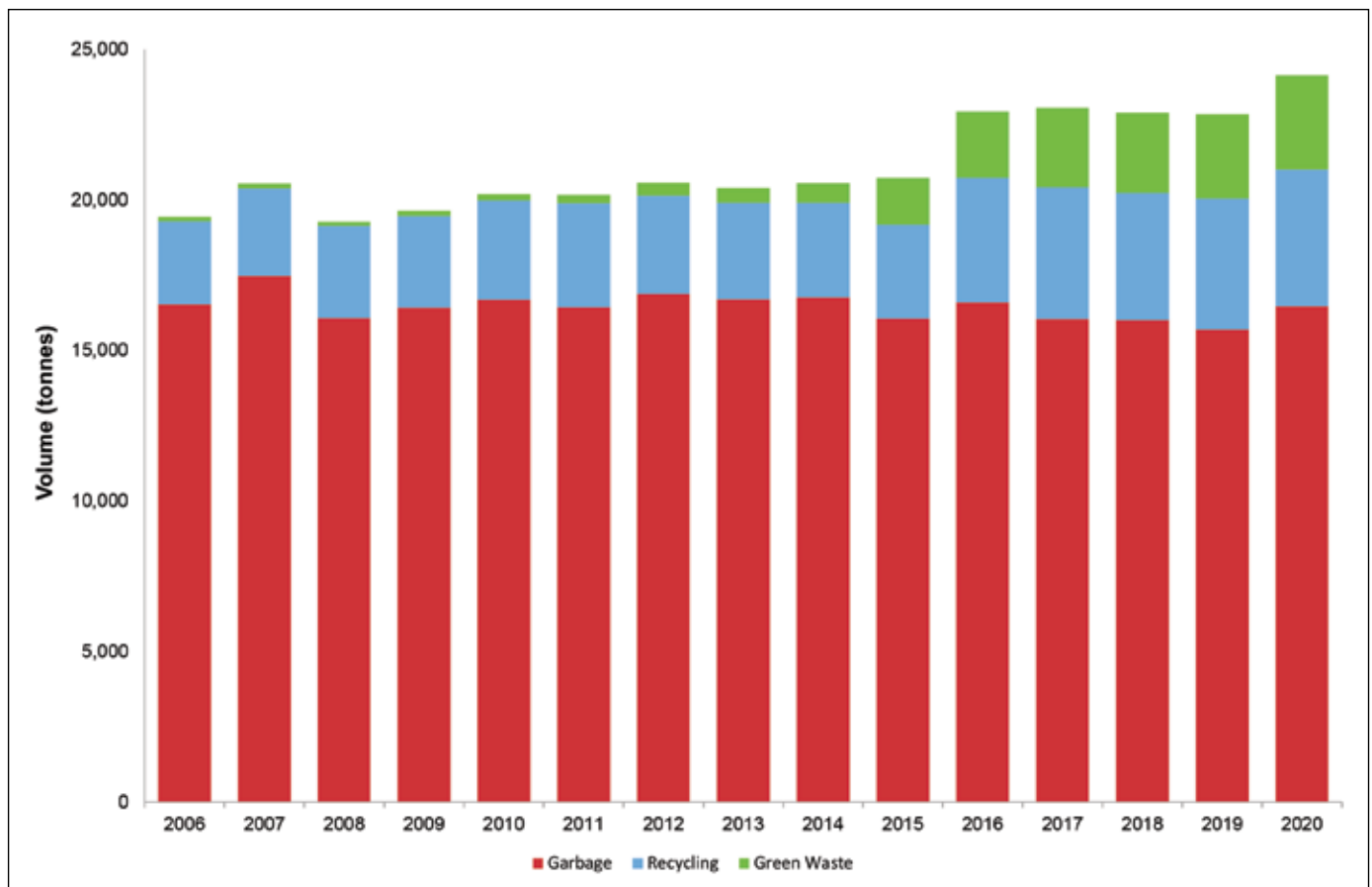




4.2 MULTI-FAMILY AND ICI (INDUSTRIAL/COMMERCIAL/INSTITUTIONAL) DIVERSION

In 2020, the volume of garbage was 16,468 tonnes (an increase of 5% from 2019). Diversion of recyclables increased by 4% over 2019, with 4,541 tonnes collected in 2020. Green waste diversion observed the largest increase of 12% over 2019 with 3,131 tonnes collected in 2020. Figure 2 reflects the total amount of garbage, recycling and green waste collected for both multi-family and ICI sectors.

Figure 2 – Multi-family, Industrial, Commercial and Institutional Garbage, Recycling and Green Waste Weights, 2006-2020 *As of June 2010, Green Waste = Yard Waste + Food Scraps.

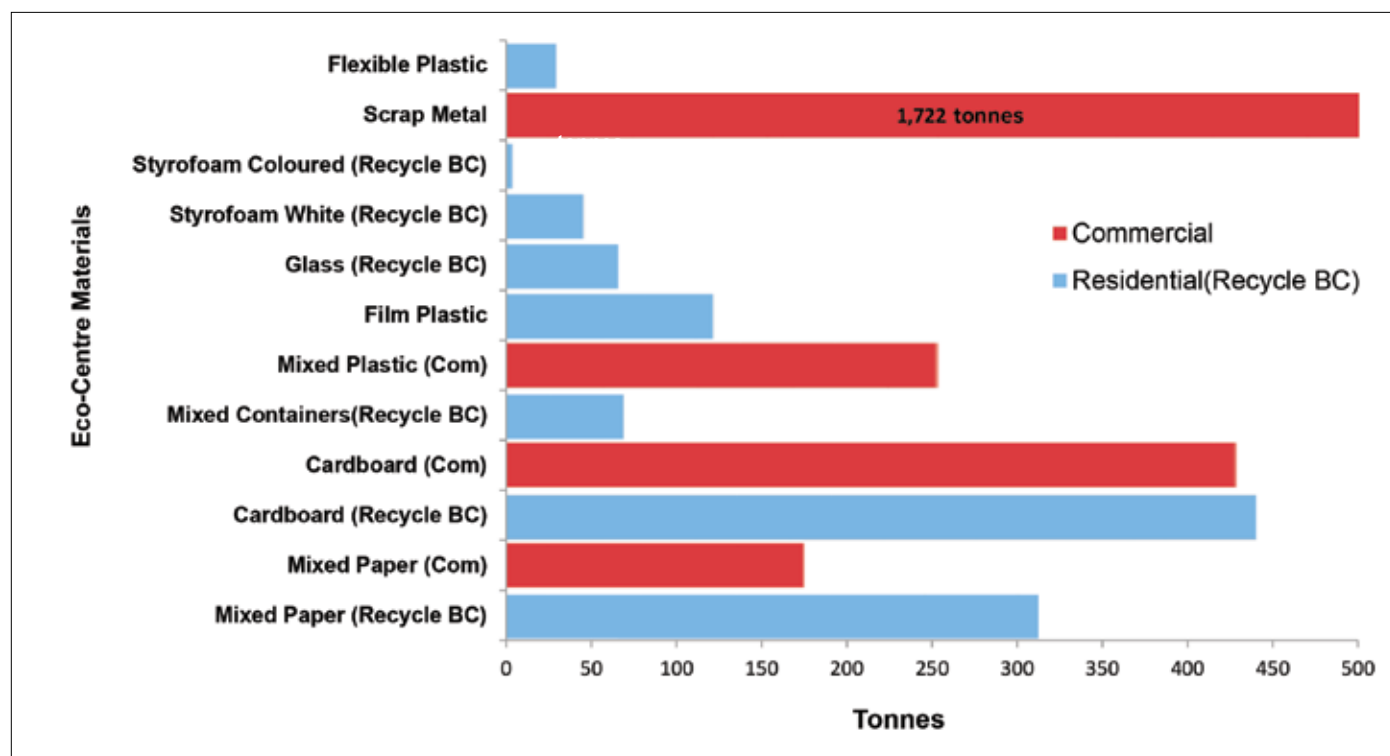




4.3 MUNICIPAL ECO-CENTRE DIVERSION

In 2020, over 23 different types of recyclable materials were processed through the City's Eco-Centre. Figure 3 shows a detailed breakdown of printed paper and packaging collected through the residential drop-off Recycle BC Program, and the materials collected through the City's commercial and scrap metal recycling program. In 2020, the Eco-Centre diverted 4,289 tonnes of recyclables (Recycle BC, commercial, scrap metal and select EPR programs), a 29% increase from 2019.

Figure 3 – Tonnage of Recycling Materials Collected at the Eco-Centre for Recycle BC, Commercial and Scrap Metal in 2020





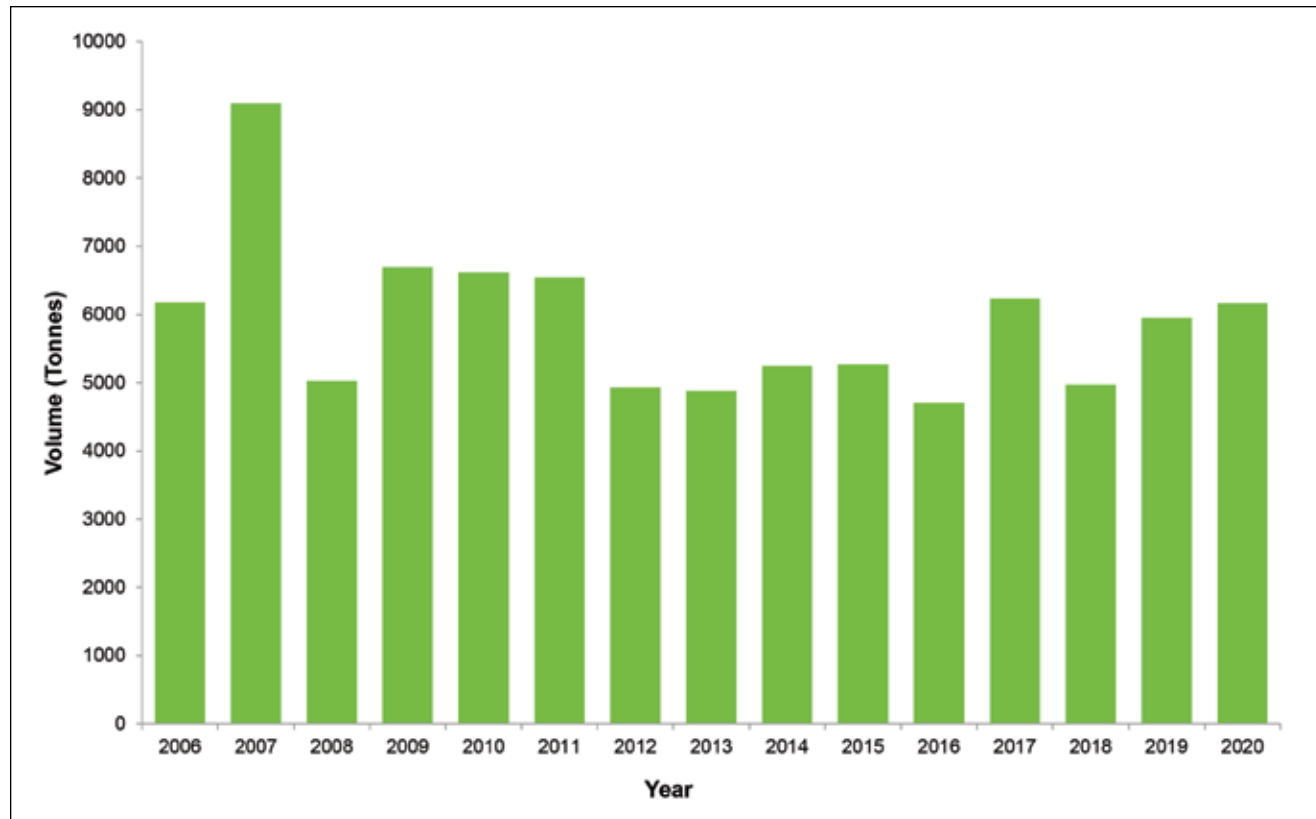
In addition to residential printed paper and packaging, the City's Eco-Centre accepts other material for recycling not collected through curbside programs. Table 1 illustrates the amount of EPR and other material accepted for recycling. In 2020, the City saw an increase in the amount of household hazardous 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 2020

EPR/Other Materials	2019	2020	
Propane Tanks	1,121	1,546	units
Used Oil/Antifreeze	143,590	189,262	litres
Car Batteries	1,806	1,585	units
Household Batteries	37	52	drums
Solvents	58	51	skids
Pesticide	22	17	skids
Paint/Aerosol	561	627	skids
Oil Filters/Containers	75	236	drums
Freon Containing Appliances	2,910	3,535	units drained

In 2020, the Eco-Centre received approximately 6,165 tonnes of green waste (a 4% increase over 2019) as illustrated in Figure 4.

Figure 4 – Green Waste Collected at the Eco-Centre, 2006-2020



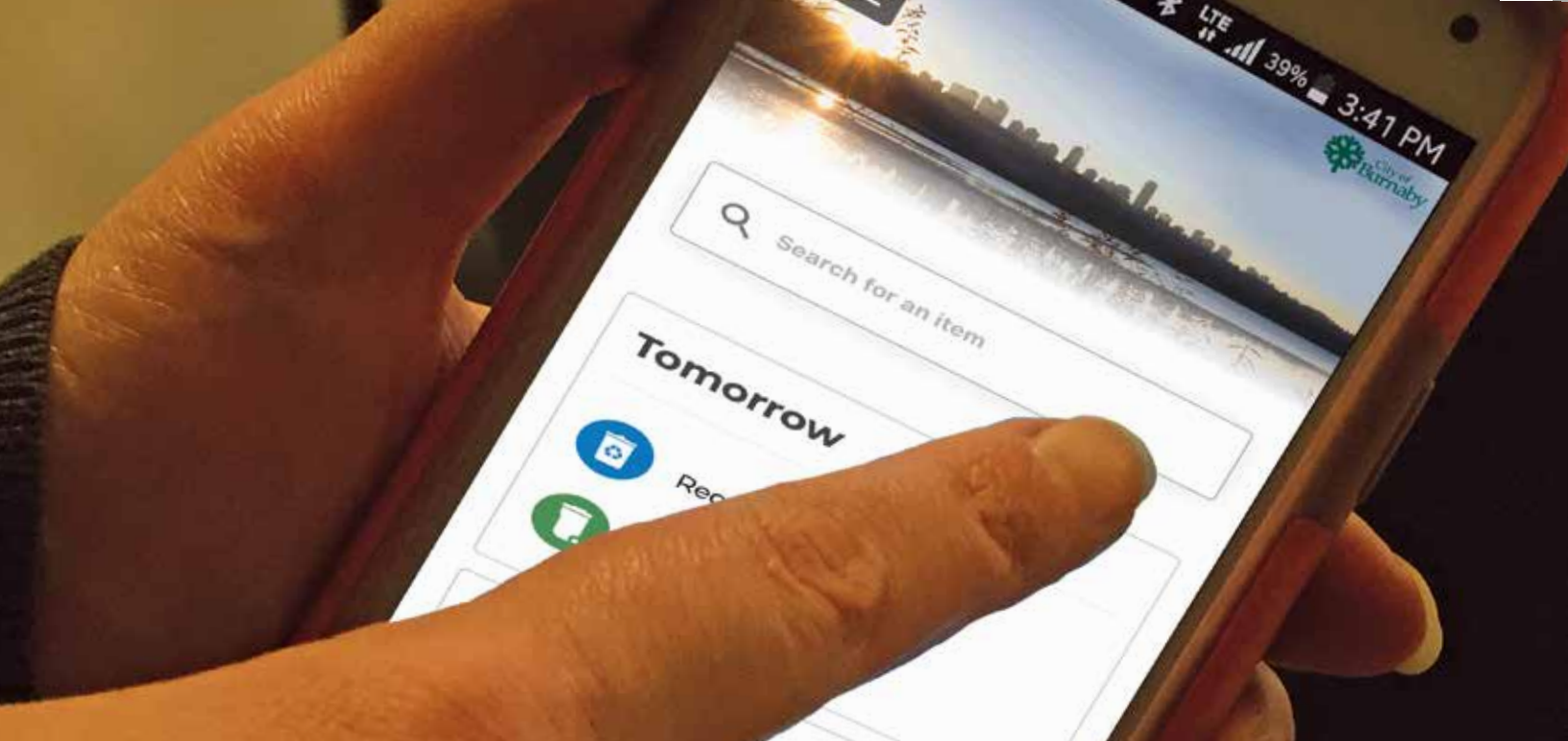


5.0 PROJECTS

Bear Area Education and Enforcement

In 2019, City Council approved the addition of a designated bear area to the Solid Waste and Recycling Bylaw. The Bear Area was a reflection of areas in Burnaby with historical sightings of bear activity as reported to the BC Conservation Officer Service line and to the City directly. Within the Bear Area boundaries, single family and two-family properties are required to follow specific set out times on collection morning while multi-family and industrial/commercial/institutional properties are also required to secure their receptacles or store them in an enclosure. 2020 was the first year the designated Bear Area was in effect during the “bear season” where increased activity is generally noted from May to November. During these months, significant education and outreach efforts were deployed to the neighborhoods where bear sightings were documented:

- » 5,196 bear awareness letters were mailed out. These letters included general information about managing attractants within the property and information about the specific Bylaw requirements for properties within the Bear Area;
- » 2,156 Bear Area stickers were posted onto garbage bins and green bins to remind residents about the required set-out times;
- » 5 evening patrols were conducted to check for set-out time compliance in the Bear Area; and
- » 2 tickets issued for Solid Waste & Recycling Bylaw violations in the Bear Area



6.0 PUBLIC OUTREACH AND EDUCATION PROGRAMS

Waste Collection App

Single family residents 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 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; 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 as well as through the main Garbage & Recycling page on the City’s website. In 2020, the number of residents actively using the app was 51,793, with the total of 3,321,372 resident interactions.

In addition to the app features mentioned above, the app allows the City to direct message users on collection schedule changes (statutory holidays, weather disruptions) and special events (e.g. Christmas Tree Collection). Table 2 outlines the types of app users that were observed in 2020.

Table 2 – Number of Recycle Coach Users in 2020

Mobile Users	19,212	37% increase over 2019
Web App Users	22,197	45% decrease over 2019*
Communication Users	3,105	20% increase over 2019
Calendar Users	7,279	15% decrease over 2019

**Previously the web app plugin was located at the top of the Garbage & Recycling webpage which dominated the content of the webpage. In 2020, the size of the web app plugin was reduced and relocated on the page to assist web users with better navigation of the remaining webpage content.*



Community Events and Seasonal Outreach Campaigns

Historically, Solid Waste and Recycling staff have attended numerous community events each year to showcase our programs and connect with the public. Due to the Public Health Orders related to the Covid-19 pandemic, community events were largely cancelled or held virtually in 2020. We look forward to attending these events again in the future. Throughout the year, the City takes part in seasonal outreach campaigns. In 2020 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 Waste Reduction, Christmas Tree collection and Metro Vancouver's Create Memories, Not Garbage Christmas Campaign.



7.0 LOOKING AHEAD TO 2021

The City has successfully met environmental challenges over the years through developing innovative solutions while maintaining its commitment to environmental protection. Looking ahead to 2021 brings forward enhancements to Burnaby's waste reduction programs that will further strengthen our waste reduction goals.

- » Present the results of 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 GHG emissions through shortened haul distances, operating efficiencies, and heating requirements.
- » 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.
- » Eliminate the first free pick-up of multi-family garbage containers to provide a financial incentive for residents of the multi-family sector to increase the diversion of recyclable materials and green waste.
- » Continue the roll out of the City's green bin program to the remaining multi-family complexes and civic facilities.
- » Enhance the Large Item & Appliance collection program to reduce the length of time items are placed curbside.
- » Pilot alternative fuel collection vehicles to reduce GHG emissions.
- » Initiate pilots programs for "smart" technology to enhance efficiency of collection operations.
- » 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).
- » Further enhance the Bear Area program and continue research on bear resistant equipment to further reduce waste associated wildlife encounters.
- » Develop mobile camera technology to be deployed in areas where abandoned waste is commonly observed to deter illegal dumping activity.
- » Work with the Marketing and Communications team to improve communication for Solid Waste & Recycling programs and services across all media platforms including the new City website planned for 2021.



