

SOLID WASTE AND RECYCLING

2023 ANNUAL REPORT





Burnaby is located on the ancestral and unceded homelands of the hə́ŋqəmiŋə́m and Skwxwú7mesh Sníchim speaking peoples. We are grateful for the opportunity to be on this territory.



CITY OF BURNABY

OUR PURPOSE

To create the city that we all want to live in and be in.

OUR CORE VALUES

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

OUR LONG TERM GOALS

PEOPLE

Empower happy, engaged and committed staff

We hire, develop and support staff to connect to our purpose and values. Our people have the tools and skills to do high-quality work, and the confidence and trust to work together, take risks, and dream big.

CUSTOMERS

Provide industry-leading and innovative customer experience

We find new ways to make it easier for residents and businesses to get things done. We remove barriers, listen to internal and external customers and make each interaction a positive experience.

COMMUNITY

Create vibrant communities

We build communities that inspire people to live their best lives. We build a city that is sustainable, inclusive and livable.



TABLE OF CONTENTS

1.0 INTRODUCTION AND HIGHLIGHTS	6
2.0 POLICY	9
3.0 PROGRAMS AND SERVICES	15
3.1 Curbside Collection Program	15
3.2 General Services Program	16
3.3 Burnaby Eco-Centre	18
3.4 Environmental Services	20
4.0 PERFORMANCE	23
4.1 Single-family Diversion	24
4.2 Multifamily and Industrial/Commercial/Institutional (ICI) Diversion	25
4.3 Municipal Eco-Centre Diversion	26
5.0 BEAR AREA	29
6.0 PUBLIC OUTREACH AND EDUCATION PROGRAMS	31
7.0 LOOKING AHEAD TO 2024	35

Figures

Figure 1 Total customer household garbage, recycling and green waste per household serviced, 2019-2023	23
Figure 2 Single-family garbage, recycling and green waste per household serviced, 2019-2023	24
Figure 3 Single-family curbside garbage, recycling and green waste weights, 2006-2023	24
Figure 4 Multifamily garbage, recycling and green waste per household serviced, 2019-2023	25
Figure 5 Multifamily, industrial, commercial and institutional garbage, recycling and green waste weights, 2006-2023	25
Figure 6 Tonnage of recycling materials collected at the Eco-Centre for Recycle BC, commercial and scrap metal in 2023	26
Figure 7 Green waste collected at the Eco-Centre, 2006-2023	27
Figure 8 Bear Area - 2023	29

1.0 INTRODUCTION AND HIGHLIGHTS

The Solid Waste and Recycling (SW&R) division of Burnaby's Engineering Department is responsible for planning, implementing and operating a wide range of waste management services across the city including:

- » solid waste collection
- » green waste collection
- » recycling collection
- » Eco-Centre operation
- » litter pickup
- » large item pickup program
- » abandoned material removal
- » waste diversion education
- » related bylaw enforcement
- » community outreach services
- » multifamily development reviews for SW&R servicing
- » Adopt-A-Street volunteer litter picking program
- » event support at City special events (e.g. Canada Day Streetfest, Willingdon Community Fair, World Rivers Day, etc.)

Burnaby's 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. Our department provides service to several sectors, including single and two-family households, multifamily buildings, and industrial/commercial/institutional/civic facilities.

In 2023, we maintained strong waste diversion results (the percentage of disposed items which enter the correct waste or recycling stream), expanded services at the Eco-Centre, 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 services which we implemented in 2023 and are planning for the future to achieve our future waste diversion goals. Single-family, multifamily and commercial/institutional waste diversion (recycling/green waste collection) and disposal (garbage) volumes are shown from program inception year to 2023 to illustrate waste trends.



Highlights from our 2023 work plan included:

- » continuing to see improvements in single-family waste generated per household
- » adding 37 pole-mounted waste collection receptacles at bus stops and space limited walking areas where recycling stations are not feasible
- » expanding the number of categories accepted for recycling at the Eco-Centre to include light bulbs, thermostats and electronics
- » consolidating the formerly-separate recycling categories of flexible plastics and film plastics into a single category for ease of sorting
- » hosting 5 Community Cleanup events with the public, including an event in each of Burnaby's quadrants
- » building up our Adopt-A-Street program with over 100 volunteers, an improved volunteer database, updated webpage, application and interactive street map to support volunteers interested in helping clean up litter along City boulevards and streets
- » continuing to work on bear-resistant steel container bin toppers and bear-resistant receptacles for multifamily properties in the designated Bear Area
- » receiving another \$128,000 in program incentive bonuses from Recycle BC for demonstrating high diversion rates in the residential curbside collection program
- » once again achieving recognition for our Eco-Centre reaching the highest levels of drop-off volumes for materials like used oil (since 2022), household batteries (since inception in 2022) and clothing donations
- » working with a non-profit organization Hamsoo, on recycling education and presentation specifically for Farsi-speaking Burnaby residents.
- » replacing 3 diesel collection trucks with compressed natural gas (CNG) vehicles to reduce fleet emissions
- » increasing the number of languages in which our Curbside Collection Calendar is offered to 10
- » adding a commercial Styrofoam™ separate drop-off location at the Eco-Centre
- » reducing administrative waste by moving from paper to iPads in the field, decreasing administrative paper waste by up to 47,000 sheets





2.0 POLICY

Federal and Provincial Initiatives

In 2020, the Government of Canada entered Phase 2 of the Canada-wide Action Plan on Zero Plastic Waste. This plan is helping to reduce plastic pollution, create economic opportunities to recover the value of used plastics and achieve the goal of zero plastic waste by 2030. This plan is designed to help Canada meet its per-capita waste reduction goals of 30% by 2030 and 50% by 2040.

The Canada-wide Action Plan on Zero Plastic Waste was announced in two phases with six priority action areas for each phase.

Phase 1

1. extended producer responsibility
2. single-use and disposable products
3. national performance requirements and standards
4. incentives for a circular economy
5. infrastructure and innovation investments
6. public procurement and green operations

Phase 2

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

On June 20 2022, the Government of Canada announced the *Single-use Plastics Prohibition Regulations*, under the *Canadian Environmental Protection Act, 1999*. These new proposed rules will prohibit the manufacture, import, and sale of six categories of single-use plastics: checkout bags, cutlery, plastic foodservice containers, stir sticks, ring carriers and straws*.

To provide businesses in Canada with enough time to transition and to deplete their existing stocks, the regulations will enter into force through a phased approach between December 20, 2022 and Dec 20, 2025:

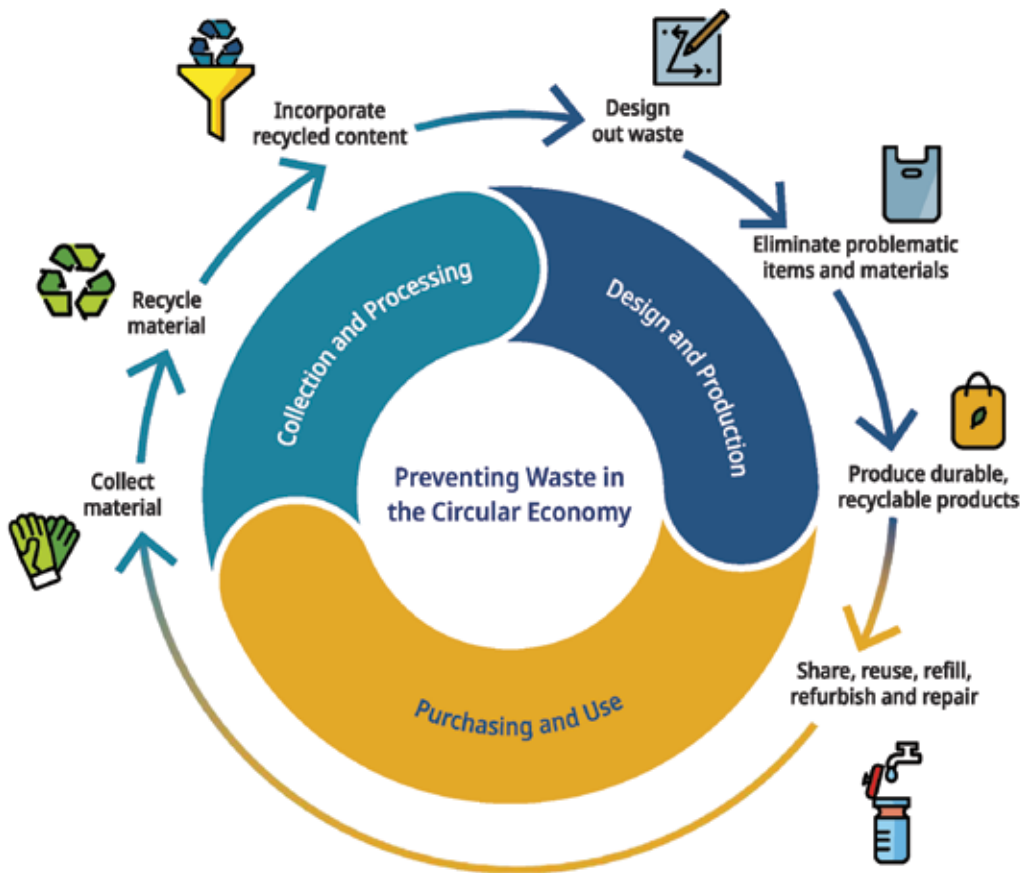
- » By the end of 2025, a prohibition on the import and manufacture of single-use plastic checkout bags, cutlery, foodservice containers, and stir sticks and straws came into force. The prohibition on the sale of these items came into force in December 2023.
- » Beginning in June 2023, the manufacture and import of ring carriers for beverage cans in Canada was prohibited, and the sale of these items will be prohibited in June 2024.
- » As of June 2024, the sale of flexible straws packaged with beverage containers will be prohibited.
- » By the end of 2025, Canada will also prohibit the manufacture and import for the purposes of export of all six categories of single-use plastics, making Canada the first among peer jurisdictions to do so internationally. These phased timelines recognize the complexity associated with retooling manufacturing lines for these products.

*(some exclusions under certain conditions).

These new regulations were challenged by industry in the courts. On November 16, 2023, the single-use plastic ban was overturned by a federal court, ruling that plastic pollution did not meet the standard as a toxic substance. The federal government appealed this ruling, and on January 25, 2024, the Federal Court of Appeal granted a stay motion preventing the previous ruling from taking effect while the appeal is ongoing.

Provincially, the Government of British Columbia - Ministry of Environment and Climate Change Strategy continues to work on the CleanBC Roadmap to 2030. CleanBC aims to reduce greenhouse gas emissions by keeping recyclable materials, food, and organic waste out of landfills, and by supporting the capture of landfill gases.

This roadmap has led to the CleanBC Plastics Action Plan, which focuses on a combination of bans on specific single-use plastic items and expanding extended producer responsibility (EPR) environmental policy in BC.



Ministry of Environment and Climate Change Strategy, Government of British Columbia. April 2022, *Preventing Single-use and Plastic Waste in British Columbia Intentions Paper*, Page 4

The BC Government brought into effect the *Single-Use and Plastic Waste Prevention Regulation* on Dec 20, 2023. This regulation is a ban on 4 regulated single-use plastic categories including:

- » shopping bags
- » disposable food service accessories (plastic cutlery)
- » food service ware (plastic take-out containers)
- » oxo-degradable plastics (additives designed to quickly break down products into microplastics)

This regulation will come into force in stages:

- 1. December 20, 2023**
Restrictions on food service accessories
- 2. July 15, 2024**
Minimum fee for reusable or paper shopping bags, restrictions on shopping bags, food service ware and oxo-degradable plastics
- 3. July 1, 2028**
Restrictions on PVC film wrap
- 4. July 1, 2030**
Restrictions on polystyrene foam meat trays

BRITISH COLUMBIA SINGLE-USE & PLASTIC WASTE PREVENTION REGULATION

Provincial Phase Out of Single-Use and Plastic Items

December 20, 2023

PROHIBITED

 Plastic utensils*

AVAILABLE BY REQUEST

 Wooden utensils

 Drink cup lids and sleeves

 Straws

 Condiments

 Napkins and wet wipes

 Garnishes (e.g., plastic sushi grass, drink umbrellas)

July 15, 2024

PROHIBITED

 Plastic shopping bags (new reusable and paper bags have minimum fees)

 Food service ware (excludes polystyrene foam trays for raw proteins *only***)

 Biodegradable plastic / PVDC film wrap

 All oxo-degradable plastics

RESTRICTED USE

 Compostable plastic food service ware and film wrap

July 1, 2028

PROHIBITED

 PVC film wrap

July 1, 2030

PROHIBITED

 Polystyrene foam trays (used for raw proteins)

* Utensils include spoons, forks, knives, chopsticks, stir sticks and drink splash plugs.

** Made of biodegradable plastic, polystyrene foam, PVC or PVDC including bowls, boxes or cartons, cups, containers, plates, platters and trays (excludes polystyrene foam for raw proteins)

Additional information and resources

For more information and resources on BC's Single-Use and Plastic Waste Prevention Regulation: gov.bc.ca/reuse

The regulation supports BC's efforts to prevent single-use and plastic waste, divert more waste from landfills and keep what we do use working for us longer - creating a cleaner, better future for everyone.



Ministry of Environment and Climate Change Strategy

Blue Bin (Mixed Containers)

Best at Depot

- gable top & Tetra Pak cartons
- plastic-coated paper containers & plates
- disposable plastic clothes hangers
- spiral wound paper cans
- hard plastic packaging
- steel & aluminum packaging, foil
- hot & cold drink cups
- empty aerosol cans (except paint & butane)
- refundables
- non-durable plastic food containers
- container caps & lids
- single-use plastic dishes, straws & utensils
- thin gauge metal tins

not accepted

- crinkly wrappers & bags
- small propane tanks
- broken dishes
- hard plastics (non-packaging)

These items are accepted at the Eco-Centre.

please remember to

- reseal containers
- remove lids
- flatten materials

No plastic foam packaging (Styrofoam™) and no plastic bags.

604-294-7972 | solidwasteandrecycling@burnaby.ca
Burnaby.ca/RecyclingandGarbage

Recycle BC continues to work with the Province to expand the list of materials eligible for blue box recycling, which will keep more plastics out of the waste stream and in line with CleanBC Plastics Action Plan.

In 2023, Burnaby began accepting new items in the blue box curbside collection as well as new items for drop-off at the Eco-Centre in our new consolidated flexible plastics category.

New blue box (curbside collection) items in Burnaby in 2023

- » plastic plates, bowls and cups
- » plastic cutlery and straws
- » plastic food storage containers
- » plastic hangers (disposable)
- » plastic-lined paper plates, bowls and cups
- » aluminum foil
- » aluminum-foil baking dishes and pie plates
- » metal storage tins

DROP OFF RECYCLING

Drop it Off **Burnaby Eco-Centre**
 Burnaby.ca/EcoCentre | 4855 Still Creek Drive

Accepted items:

- protective & quality cushion packaging
- crinkly wrappers & bags
- plastic bags & overwrap
- stand-up & zipper lock pouches
- hard plastics (non-packaging)
- clothing & shoes, books
- cooking oil
- plastic foam packaging (Styrofoam™)
- batteries
- flammable liquids & pesticides
- paint
- used oil, filters, containers
- propane & butane tanks (refillable/non-refillable)
- electronics & e-toys
- appliances
- large & small scrap metal
- gasoline
- power tools
- power tools
- exercise machines
- lighting & light bulbs
- light bulbs
- smoke detectors & thermostats

NOT ACCEPTED:

- drinking glasses
- broken dishes
- window glass
- garbage
- sheets
- mirrors

One call, and I'm gone!
 Do you have an old couch, mattress or large appliance you no longer want? Give us a call at 604-294-7972 before you place it outside to arrange for a pick up!

Take it Back

Items which are not accepted through the City's recycling program or at our Eco-Centre, can be recycled through a **provincial take-back program**.

Find a drop off location
 604-RECYCLE (604-733-9253)
borecycles.ca | mivrecycles.org

More information at Burnaby.ca/LargeItem
Large Item & Appliance Pick-Up

Burnaby Eco-Centre | 4855 Still Creek Drive
 Hours of Operation | Monday to Sunday, 8 am-4 pm (hours may be extended seasonally)
 604-294-7972 | solidwasteandrecycling@burnaby.ca | Burnaby.ca/RecyclingandGarbage

New depot-only (drop-off) items - flexible plastics

- » plastic sandwich and freezer bags
- » plastic shrink wrap
- » flexible plastic drop sheets and covering
- » flexible plastic bubble wrap
- » plastic shopping bags

Accepting more items will continue to make it easier for people to divert plastics out of the garbage, and into the proper recycling facilities. As technology improves and collection systems and facilities become more capable, our recyclable items list will continue to expand. The CleanBC Roadmap to 2030 will continue to lay the groundwork for funding, innovation and capability for the future.

Regional Waste Management System

Burnaby is one of 21 member municipalities that coordinate with Metro Vancouver on the solid waste initiatives shaping our 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.

Metro Vancouver has since initiated the process of updating the ISWRMP to ensure the plan remains current in guiding the needs of the region. The updated plan is anticipated to build off the success of the current ISWRMP while accelerating waste diversion, reducing GHG emissions and promoting a circular economy. A circular economy is a model of production and consumption of materials in which components do not leave the cycle to become waste or pollution - a focus on recycling, repairing and reusing products and materials for as long as possible.

Burnaby's Initiatives

In November 2023, the Province introduced new housing legislation to increase small-scale multi-unit housing on single and two-family residential properties, including duplexes, triplexes, fourplexes, sixplexes and laneway homes. Burnaby is required to make zoning bylaw changes to permit these new densities by June 30, 2024. These changes will require changes to our solid waste and recycling services as well, in order to properly service and accommodate the changing landscape of our residential neighbourhoods. These changes come on the heels of Burnaby's introduction of laneway homes and secondary suites in semi-detached homes in 2023.

With densification of residential properties will also come an increase in waste generation and opportunities to work on focused diversion strategies, including bylaw updates. On December 11, 2023, the Burnaby Solid Waste

In 2023, membership recruiting of two advisory committees key to the plan's renewal was completed and plan review commenced. The first was the Public and Technical Advisory Committee, which provides a forum for experts with a range of backgrounds to contribute to the review and update of the plan. The second was the Industry Advisory Committee, which provides a forum for industry contribution, discussion and advice on management planning, operations and policy issues related to solid waste and recycling services in Metro Vancouver.

Burnaby, like its municipal neighbors in the region, collaborates and shares ideas in two Metro Vancouver subcommittees - the Regional Engineers Advisory Committee (REAC) Solid Waste Subcommittee and the Regional Waste Reduction Coordinators Committee (RWRCC). These touchpoints provide opportunities for municipalities to share what programs and services are working, and a place to get ideas on what else is happening in other municipalities. Metro Vancouver can also share what projects or plans are in development and the impacts they will have on the region. They also provide workshops and resources for municipalities and can be a liaison between the province and local governments.

and Recycling Bylaw 2010 (Bylaw 12875) was amended. This amendment specified the definition of primary dwelling to align with the Burnaby Zoning Bylaw – Bylaw 14630. These changes also requires that property owners must first upgrade to the largest receptacle size before additional receptacles can be requested. This change ensures our residents are using the limited curbside space available for collection efficiently. Recycling bins are provided for free to residents to encourage diversion of waste into the recycling and green waste streams, costing them less and helping to change waste disposal practices. As our neighbourhoods densify, space on the curb to put bins out for collection will become far more limited, and it is important to ensure our collection vehicles have enough room to collect efficiently. Future bylaw amendments and updates to our waste collection strategies may be required to ensure a high level of collection service continues for all residents.



3.0 PROGRAMS AND SERVICES

Burnaby’s in-house collection services have been integral to the City’s Solid Waste and Recycling Program for many years. The programs and services we provide are made possible by a team of approximately 140 staff members and a fleet of 78 vehicles, with our office team and field crews working together to meet the changing needs of the community.

3.1 Curbside Collection Program

The curbside collection program collects waste and recycling materials from three sectors: single-family, multifamily, and industrial/commercial/institutional. Our multi-stream recycling collection program (blue for mixed containers, yellow for mixed paper, and grey for glass jars and bottles) supports Recycle BC’s

residential printed paper and packaging recycling program. Our green bin program accepts food scraps, yard trimmings and leaf debris to be processed into valuable compost at a City-contracted facility. Garbage is collected and transported to a Metro Vancouver facility for disposal or incineration.

	Single-family	Multifamily	Industrial, commercial and institutional
Property type	Houses, duplexes and row-houses	Condos, apartments and townhomes	Businesses, religious buildings and educational establishments
Customers	33,989 households	40,637 households 582 contracts	575 contracts
Equipment	15 automated trucks 17 recycling trucks 1 rear-loading truck 1 container delivery van	7 front-loading trucks 6 recycling trucks 2 rear-loading trucks 8 jitney trucks	
Receptacles provided	Garbage bins (120L, 180L, 240L, 360L) Recycling - blue boxes, grey boxes, yellow bags Green bins (180L, 240L, 360L)	Garbage containers (1, 3, 4 and 6 yards) Recycling Blue, yellow and grey (240L, 360L) Cardboard containers (3, 4 and 6 yards) Green bins (240L, 360L)	
Collection frequency	Recycling and green bins collected weekly Garbage collected every other week	Recycling and green bins collected weekly Garbage collected 1-2 times per week	

3.2 General Services Program

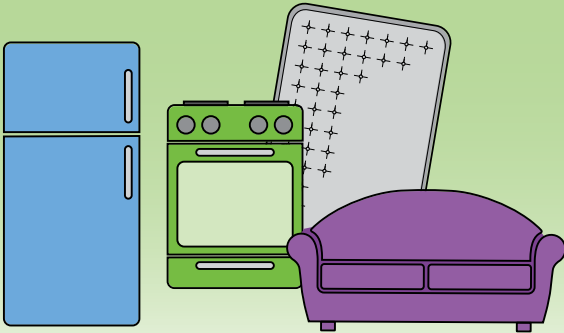
The General Services Program is responsible for the City's Large Item Pickup, Litter and Public Space Collection and Abandoned Waste Collection programs. The General Services program utilizes two rear-loaders for large item collection and abandoned waste collection, four 2-tonne flat deck trucks for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

Large Item Pickup

In addition to weekly recycling and waste collection services, residents can request special pickups for large items like mattresses, appliances and couches.

The Large Item Pickup program continues to be one of our most popular programs, which is much appreciated by residents for being provided at no charge and accommodating up to three items per pickup. Residents can request this service by phone or through a new online form. To support the regional disposal ban on mattresses, the City collects and diverts all mattresses to one recycling facility contracted by the City.

	2023	Change from 2022
Mattresses and boxsprings	6,738	8,376 (20% decrease)
Large items	10,703	12,538 (15% decrease)
Appliances	8,608	6,494 (25% increase)



Abandoned Material Service

Large items like old mattresses, couches and appliances are commonly abandoned and found on roadsides in Burnaby. Abandoned items collection crews are dispatched when these items are found by staff, or in response to complaints from residents. In 2023, the City received 5,431 (a 13% increase from 2022) service requests for abandoned items, general litter and illegal dumping.

In an effort to combat illegal dumping in Burnaby streets and lanes, residents in neighborhoods that historically experience a high frequency of dumping activity received a letter about the Large Item Pickup program that encouraged them to report abandoned materials in their area. In 2023, the City proactively sent 2,177 information letters to residents in such areas, which may have contributed to the increase of requests for large item pickup. Towards the end of 2021, the Engineering department acquired a mobile camera unit to place near illegal dumping hotspots on city streets and lanes. Our 2023 data confirms that this camera is a useful tool in deterring illegal dumping near the unit location.



Streetscape Recycling and Waste Collection

Littering, a common issue in dense, urban areas like Burnaby, detracts from the beauty of our natural environment and streetscape. To prevent littering, the City has made it easier to properly dispose of garbage and recycling in public by installing 516 waste receptacles on major arterial roads, at bus stops and in heavy pedestrian traffic areas. The litter collection fleet empties these receptacles on a regular basis and picks up litter on the streets and boulevards.

To encourage recycling in public places, the City entered into an agreement with Creative Outdoor Advertising in 2010 to supply the City with three-stream SilverBox™ receptacles — one for waste, one for 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 the total units is also allocated for City advertising. Several SilverBox™ receptacles currently have City-branded posters to support our Climate Action Framework by emphasizing the “Reduce, Reuse, Recycle” message. In 2023, there were a total of 369 SilverBox™ receptacles throughout the City.

In addition to the Silverboxes™, the City is exploring other options for possible streetscape receptacles. These units provide options for servicing where space is limited or the volume demand is especially great. Streetscapes diversion rate in 2023 increased to 32%, with 166 tonnes of garbage (4% increase) and 78 tonnes of recycling (20% increase) collected.



3.3 Burnaby Eco-Centre

The Burnaby Eco-Centre is the foundation of the City’s waste diversion program. It functions as both a true one-stop drop-off spot for residents, and as a central transfer facility for green waste collected by the City. In 2023, 44 different types of recyclable materials were processed through the Burnaby Eco-Centre.

Operated by City staff, the Eco-Centre has always been on the frontline of new recycling initiatives. It was the first place in Burnaby to offer 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.

The City continues to partner with several recycling stewardship agencies and local charities to offer free recycling and donation drop-off, including:

- » Recycle BC
- » Product Care Association
- » Call2Recycle
- » BC Used Oil
- » Major Appliance Recycling Roundtable
- » Encorp Pacific (Canada)
- » BC Children’s Hospital
- » Diabetes Canada
- » Salvation Army
- » K2 Services
- » Canadian Electrical Stewardship Association (CESA)



Accepted Materials at the Eco-Centre

Extended Producer Responsibility (EPR)

- » newspaper, magazines, mixed paper (including phone books)
- » cardboard
- » large appliances
- » glass jars and bottles
- » tin and aluminium cans
- » plastic film
- » flexible plastic packaging
- » household and automotive batteries
- » household paints, solvents, gasoline and pesticides
- » used motor oil, oil containers and filters and antifreeze
- » Styrofoam™ (white and coloured)
- » small appliances
- » power tools
- » smoke detectors
- » light bulbs
- » thermostats
- » electronic devices and electronic toys
- » batteries

Donations

- » clothing
- » books
- » cell phones

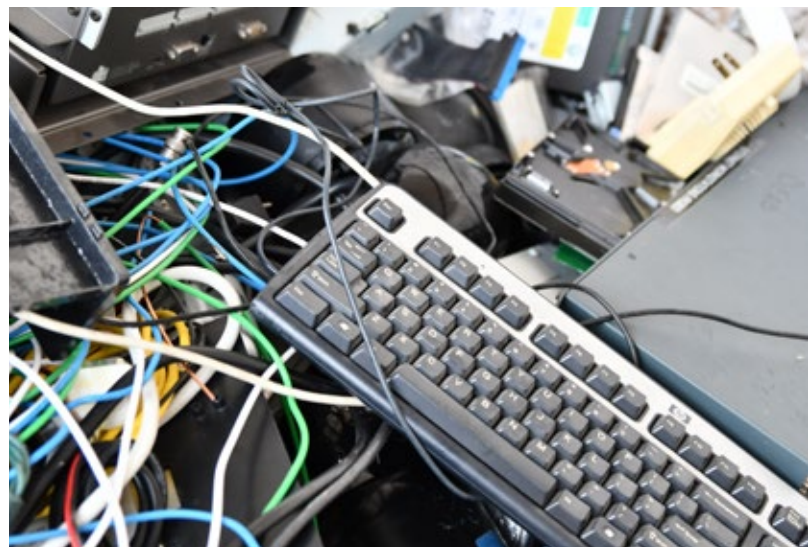
Miscellaneous

- » scrap metal
- » newspaper, magazines, mixed paper (including phone books) (commercial non-Recycle BC)
- » cardboard (commercial non-Recycle BC)
- » used cooking oil
- » propane and butane tanks
- » hard plastics

Green Waste

Burnaby residents may drop off one load of green waste (100 kg or less) per day at no cost. Larger loads of green waste (yard trimmings) can be dropped off at the facility for \$107/tonne. In addition to dropping off recyclables and green waste material, residents can purchase backyard composters and rain barrels through the Eco-Centre. In 2023, Burnaby residents purchased 123 composters and 32 rain barrels.

EPR is an approach to recycling that puts the responsibility of the life cycle of the products sold back on the producers, i.e. manufacturers, distributors and retailers. This includes the collection by curbside or depot and usually forming an agency who will operate that recycling program.



3.4 Environmental Services

Development Reviews

As the City continues to grow, the Environmental Services team works on development projects to ensure new constructions include adequate space for solid waste and recycling operations at the design level. This includes recycling and garbage areas, bulky item storage, and a staging area for collection. Good design ensures waste diversion will not be limited by space or access. It also helps our City team perform effective route planning for our waste collection routes, which is key for good waste management and the next generation of Burnaby's development. Our teams work as one of the many teams of reviewers of preliminary plan approval (PPAs), rezoning plans (REZ) and building permits (BP) that include creating, altering or relocating solid waste and recycling spaces for new and existing developments.

Review type	Completed in 2023	Submitted in 2023 (in-progress)
PPA	39	8
REZ	10	33
BP	44	26

The image displays architectural drawings for a development project, specifically focusing on waste and recycling access. It includes two site plan views showing building footprints, parking areas, and designated waste and recycling zones. A cross-section drawing shows the vertical arrangement of these spaces. Below the drawings is a table titled 'Waste and Recycling' with columns for 'Waste Type', 'Volume (m³/yr)', 'Access', 'Storage', and 'Collection'. To the right of the table are two sections: 'Design criteria for storage facility' and 'Checklist for collection vehicle', each with a list of requirements. At the bottom right, there are four small diagrams of collection vehicles and a title block that reads 'BP SOLID WASTE AND RECYCLING ACCESS PLAN' and 'A1.18'.

Waste Type	Volume (m³/yr)	Access	Storage	Collection
Household Waste	100
Construction Debris
...

Education and Enforcement

The Solid Waste and Recycling Bylaw requires that residents and businesses across Burnaby follow the proper diversion channels for recyclables, green waste, and non-hazardous waste. These services can be arranged through the City or a private hauler, however some residents and businesses are not aware of how to properly dispose of some materials, or choose not to utilize these services. When material is placed in a bin in which it does not belong, it is noted by staff, a sticker placed on the bin, and a letter sent to the owner about their bin contamination. These letters contain information about the nature of the contamination, and their options for proper disposal. If a second contamination incident is noted, a service report is generated for environmental

services staff to follow-up. During follow-up, an on-site inspection of the bin in question is conducted. If contamination remains an issue, staff will attempt other methods to connect with the occupants/property owners/property management staff to ensure they are aware of the issue. Unfortunately, some individuals/businesses still continue to contaminate their bins after these good-faith efforts, at which time the situation escalates to the next step of enforcement - a Bylaw Violation Notice (BVN), better known as a ticket.

Illegal dumping, when linked to an owner, results in a letter from our staff and a BVN, depending on whether the item(s) can be collected immediately.

SW&R bylaw infraction service reports (SRs)	
Average per month	55
Total (2023)	465
Average resolved per month	73
Total resolved (2023)	878

Contamination letters issued	
Garbage	25
Recycling	2591
Yard waste	1722
Multifamily ICI	176
Illegal dumping	147

Large/bulky item reminder letters	2020	2021	2022	2023
Letters	2697	8864	898	2170

Tickets	Total	2020	2021	2022	2023
Total	86	24	12	19	31



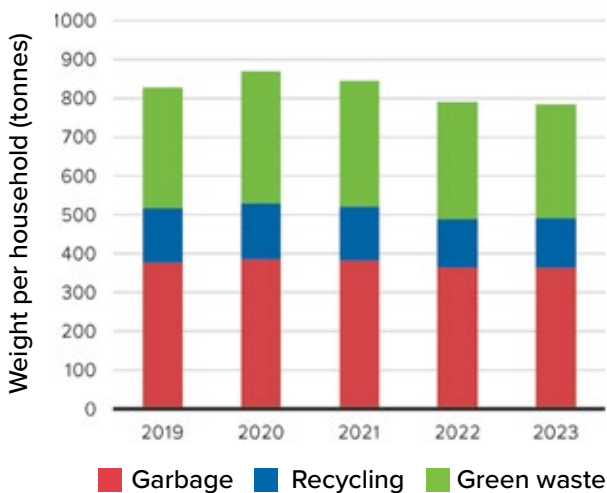
4.0 PERFORMANCE

In 2023, the volume of garbage collected continues to reduce year-over-year despite a growing number of overall customers, with the volume of both recycling and green waste continuing to increase. The City collected approximately 66,216 tonnes of total material (garbage, recyclables and green waste) generated by Burnaby residents and businesses, which represents a 2% (1,059 tonnes) increase from the previous year with those increases in recycling and green waste only.

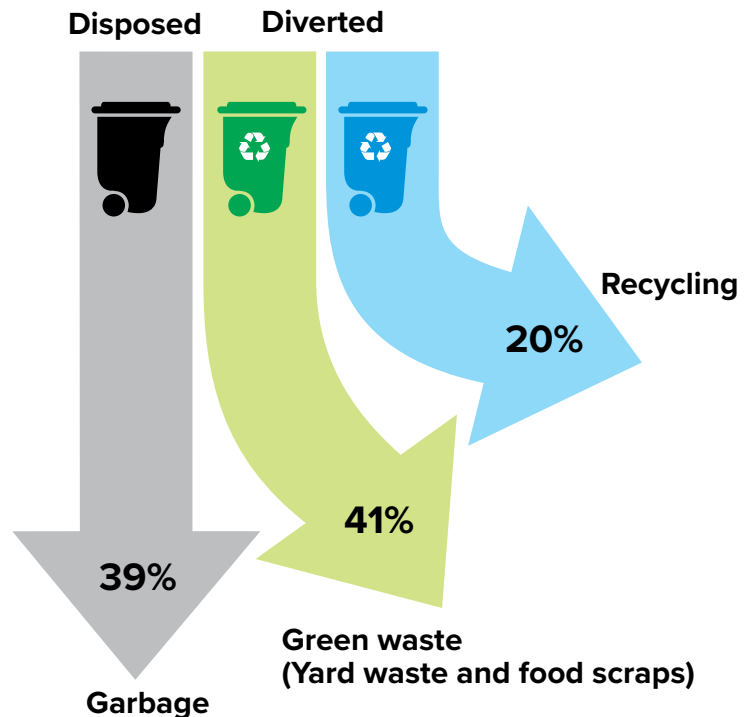
Overall waste generated per household serviced across Burnaby has continued to decrease since 2020. We aim to continue this trend and our team is using the benchmark of a 5 kg reduction (to a total of 784 kg per household serviced) as our benchmark to surpass in 2024.

The diagram below illustrates our 2023 disposal versus diversion rates. The City's overall diversion rate increased from 60% in 2022 to 61% in 2023. The Eco-Centre saw increases in diversion for green waste, scrap metal, electronics, batteries, pesticides, oil and cooking oil above 2022 levels.

Figure 1 – Total customer household garbage, recycling and green waste per household serviced, 2019-2023



2023 Breakdown of Disposal/Diversion Achieved by the City System (Single-family, multifamily and industrial/commercial/institutional)



4.1 Single-family Diversion

In 2023, the weight of garbage collected decreased for a fourth straight year to 10,957 tonnes. Diversion of recyclable materials increased 4% to 5,202 tonnes collected. Green waste collection also decreased 3% from 2022 to 18,419 tonnes. Burnaby's single-family total diversion rate was 68%.

Single-family waste per household serviced has remained steady at 322 kg for garbage, increased for recycling to 153 kg, and decreased for green waste to 542 kg for a cumulative total of 1,017 kg of waste generated per household serviced. Figure 2 on the right shows the diversion per household serviced since 2019.

Figure 2 – Single-family garbage, recycling and green waste per household serviced, 2019-2023

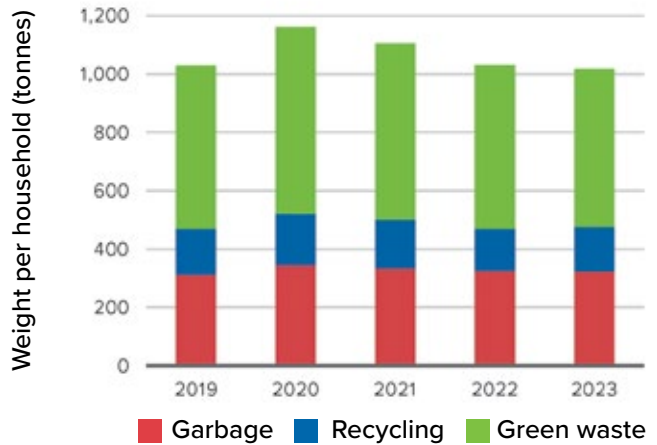
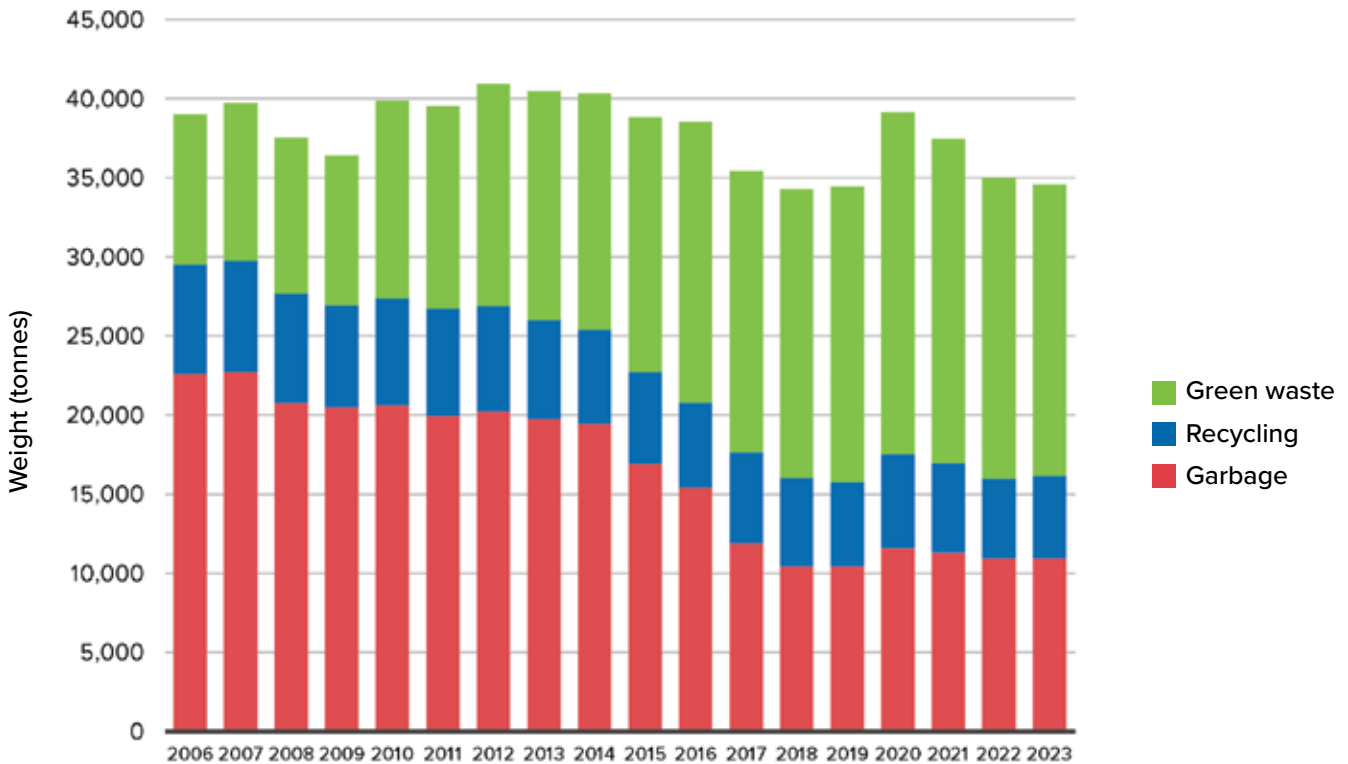


Figure 3 – Single-family curbside garbage, recycling and green waste weights, 2006-2023

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 Multifamily and Industrial/Commercial/Institutional (ICI) Diversion

In 2023, 16,080 tonnes of garbage was collected from multifamily and ICI clients, a decrease of 1% from 2022. Diversion of recyclables increased by under 1% over 2022, with 4,407 tonnes collected. Green waste diversion continues to increase each year, just under 1% over 2022 with 3,420 total tonnes collected. Figure 5 reflects the total amount of garbage, recycling and green waste collected for both the multifamily and ICI sectors. The multifamily and ICI total diversion rate increased from 32% in 2022 to 33% in 2023. While the overall trend on diversion rate for multifamily and ICI sectors is slowly improving each year, additional work is required to build on this positive trend.

Multifamily waste per household has decreased for garbage to 396 kg, and increased for recycling and green waste to 108 kg and 84 kg, respectively. In total, this amounts to 588 kg of waste generated per household serviced. Figure 4 on the right shows the diversion per household serviced since 2019.

Figure 4 – Multifamily garbage, recycling and green waste per household serviced, 2019-2023

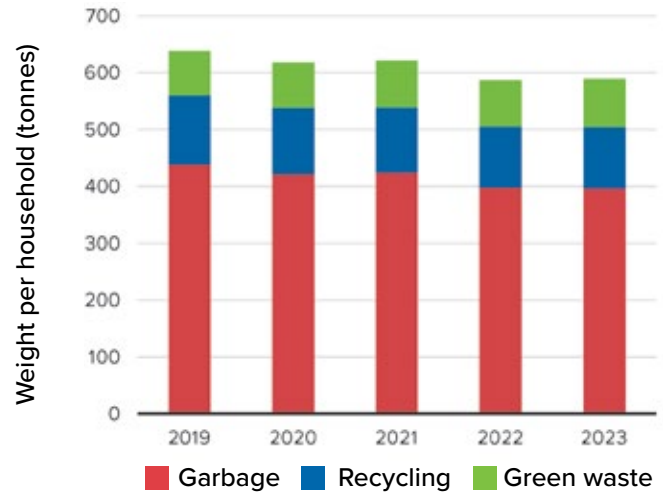
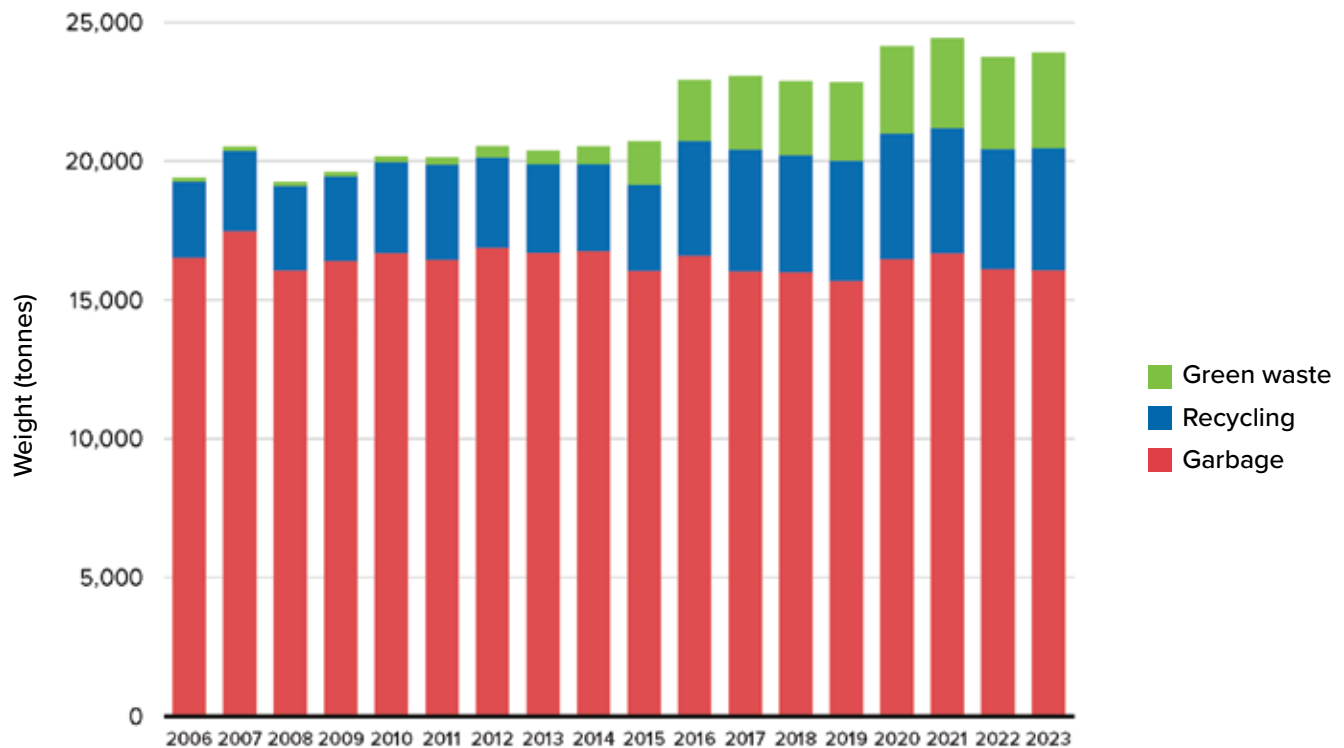


Figure 5 – Multifamily, industrial, commercial and institutional garbage, recycling and green waste weights, 2006-2023 As of June 2010, green waste = yard waste + food scraps.



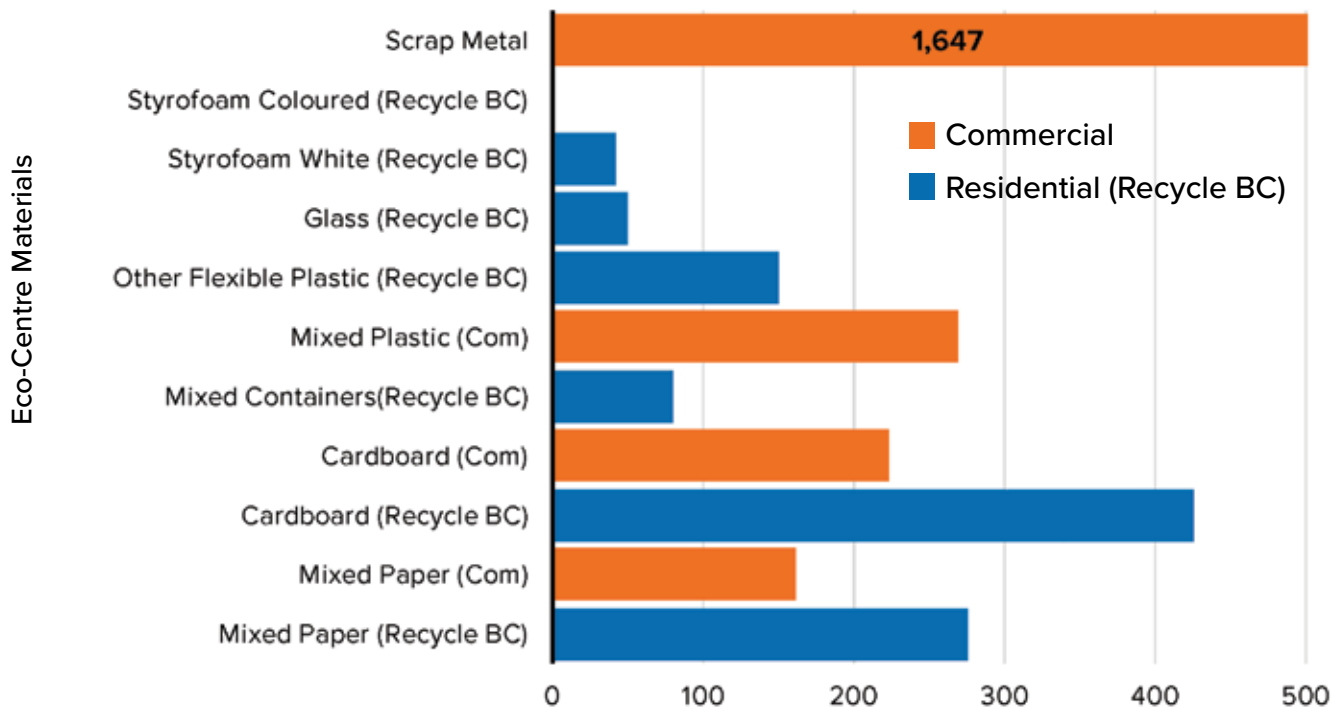
4.3 Municipal Eco-Centre Diversion

Figure 6 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 2023, the Eco-Centre diverted 5,509 tonnes of recyclables (Recycle BC, commercial, scrap metal and select EPR programs), a 9% increase from 2022

In addition to residential printed paper and packaging, the City’s Eco-Centre accepts other material for recycling not collected through curbside programs. The table on page 27 illustrates the amount of EPR and other material accepted for recycling. In 2023, the City saw consistent amounts of household hazardous waste (such as household/vehicle batteries, paint, solvents, used oil and antifreeze) diverted from the garbage through the Eco-Centre.

In 2023, the Eco-Centre received approximately 6,461 tonnes of green waste (a 22% increase from 2022) as illustrated in Figure 7.

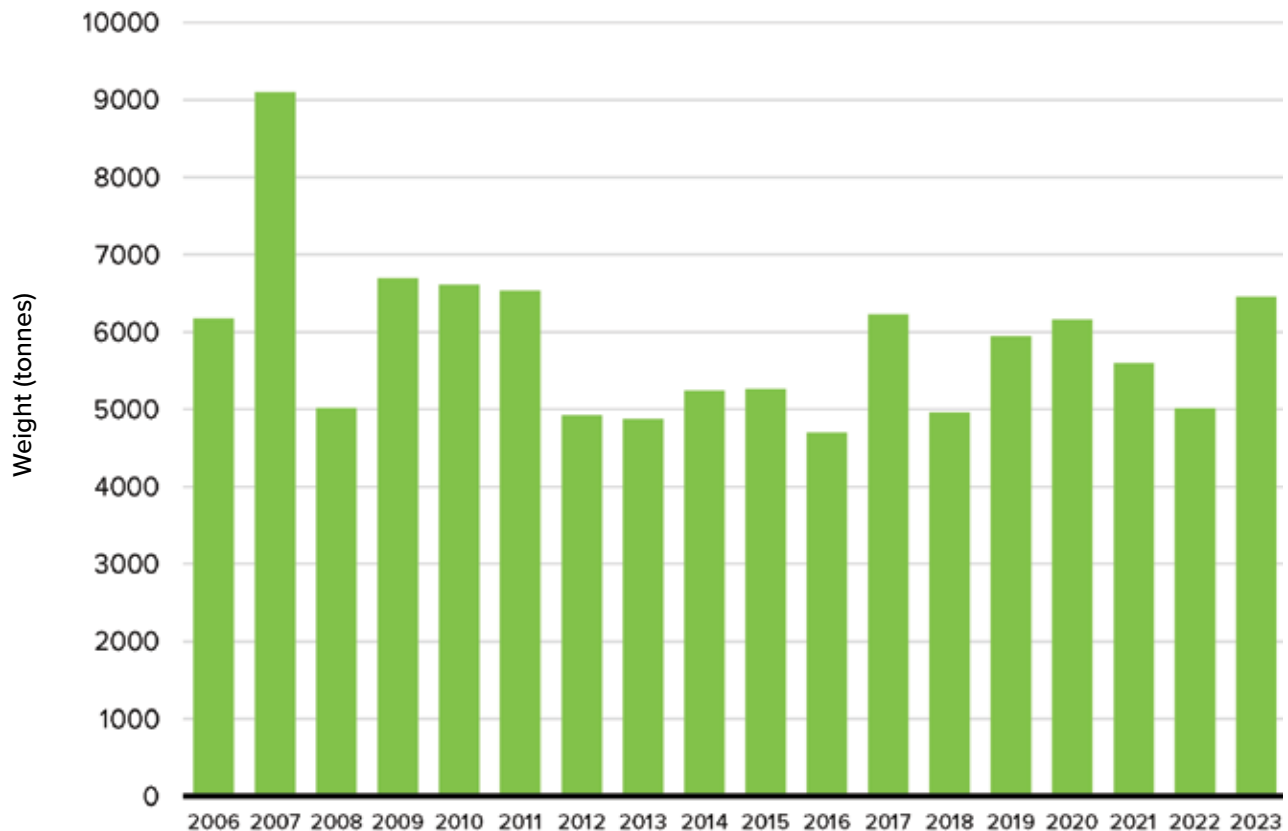
Figure 6 – Tonnage of recycling materials collected at the Eco-Centre for Recycle BC, commercial and scrap metal in 2023



Amount of EPR and other materials collected at the Eco-Centre in 2021-2023

EPR/other materials	2021	2022	2023	
Propane tanks (>5lbs)	1,733	1,332	1,583	units
Used oil/antifreeze	190,745	189,465	185,980	litres
Car batteries	1,540	1,506	1,755	units
Household batteries	12.4	15.7	21.4	tonnes
Solvents	42	40	38	skids
Pesticide	19	11	16	skids
Paint/aerosol	621	750	743	skids
Oil filters/containers	279	111	85	drums
Freon-containing appliances	3,449	3,097	4,577	units drained

Figure 7 – Green waste collected at the Eco-Centre, 2006-2023





10,680
bear awareness packages
distributed in 2023

639
follow-up letters
issued



BURNABY BEAR AREA

We share the environment with black bears. They move through local forests, mountains and wilderness areas in search of food. Unfortunately, when bears associate food with human activities, they lose their fear of people.

To keep wildlife and the community safe, the City of Burnaby has established a Bear Area. This includes places where black bears have been spotted, such as areas around Burnaby Mountain, Burnaby Lake, Deer Lake, Robert Burnaby Park and other parklands.

BEAR AREA REQUIREMENTS

By following some simple rules in the Bear Area, we can reduce the potential for conflict. Properly store your waste bins (garbage, recycling and green bins) to minimize bear attractants.

- Single- or two-family properties must:**
- Set out waste bins between 5:30am and 7am on collection day and remove waste bins by 8pm.
 - Securely store waste bins within your property on non-collection days.
- Multi-family properties must:**
- Set out waste bins between 5:30am and 7am on collection day and remove waste bins the same day.
 - Store garbage, yard waste, food scraps and recycling in bear-resistant bins or store all bins in a bear-resistant enclosure on the property.
- Industrial, commercial and institutional properties must:**
- Store all garbage, yard waste, food scraps and recycling in bear-resistant bins or store all bins in a bear-resistant enclosure on the property.

FAQ

- What do I do if I see a bear?**
If you see a bear in a residential area, please report your sighting to a BC Conservation Officer by calling 1-877-952-7277. The reports can help the City better understand where bear activity may need to be monitored more closely.
- Do the rules for setting out and removing bins apply year round?**
Yes. While most bears go into a deep sleep from November to April, some bears may not hibernate and could still be present within the Bear Area.
- What is a bear-resistant enclosure?**
A bear-resistant enclosure is a fully enclosed structure that is strong enough to prevent access by bears. This may include a garage, shed, fenced structure or a structure approved by Burnaby's Engineering Department.
- Are there fines for failing to comply with the Bear Area requirements?**
Our goal is to minimize human-bear interactions, and we need your cooperation. If a bear is spotted in your neighbourhood, we may issue a notification letter. Failure to comply may result in a penalty of either \$200 or \$500.

more info burnaby.ca/bear-area

5.0 BEAR AREA

Bear Area Education and Enforcement

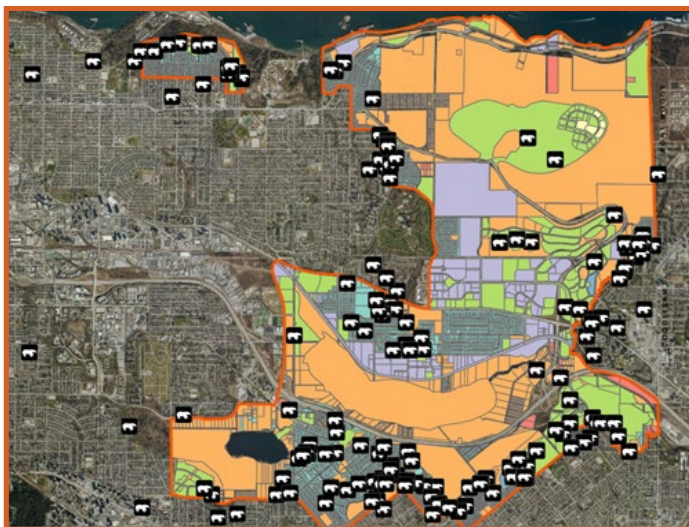
In 2019, City Council approved the addition of a designated Bear Area to the Solid Waste and Recycling Bylaw. Within the Bear Area, single and two-family properties are required to follow specific set-out times on collection morning, while multifamily and industrial/commercial/institutional properties are also required to secure their receptacles or store them in a bear-resistant enclosure.

The Bear Area’s boundaries are based on bear activity data as reported to the BC Conservation Officer service line and to the City directly, and are adjusted annually based on changes in patterns of reported bear activity. Bear activity throughout pockets of the northeast quadrant of Burnaby prompted an expansion of the Bear Area. The zones are identified by the red border around each zone.

2023 was the fourth full year Bear Area regulations have been in effect. To prepare residents for the upcoming bear season (May to November) when increased bear sightings are generally noted, bear awareness packages were mailed out to all residents living in the Bear Area. Following the general awareness packages, environmental staff conducted some monitoring of neighborhoods with increased bear activity, collaborating with B.C. Conservation officers and communicating non-compliance issues with property owners. During the peak bear season, bear incidents in Burnaby declined by 5% over 2022 during the peak bear season (from May to September) as seen in the table below.

Areas with the highest activity, such as the Burnaby Mountain community, require additional support with controlling attractants. In these areas, trials on additional measures are in progress, including metal bear toppers on top of metal garbage bins, and exploring new green food scrap bins.

Figure 8 - Bear Area - 2023



Burnaby black bear reports by month (peak bear season)		
Month	2022	2023
May	63	59
June	143	122
July	113	75
August	51	61
September	17	50
Total	387	367



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 the most up-to-date garbage, recycling and green bin information. The app also provides the user with:

- » collection-day reminders for residential curbside collection schedules, including alerts for holiday schedule changes and weather disruptions
- » collection details, including accepted items and preparation requirements for the recycling, green bin or garbage programs
- » notifications on changes in service and accepted materials (i.e. Recycle BC updates)
- » drop-off depot information through the “What goes where?” searchable database
- » “Report a Problem” feature to notify the City about missed collection, illegal dumping and other waste or recycling concerns



The app is currently available for Apple and Android operating systems as well as through the recycling and garbage pages on the City’s website. In 2023, the total number of users on the app was 49,171 (64% decrease from 2022) with a total of 4,755,401 interactions (21% increase from 2022).

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 2023.

Number of Recycle Coach users in 2023

Mobile users	25,279
6% increase over 2022	
Web app users	12,875
87% decrease over 2022	
Communication users	6,412
6% increase over 2022	
Calendar users	4,605
64% decrease over 2022	

Number of Recycle Coach reports in 2023

Problems reported	775
13% decrease over 2022	
General issues	106
12% decrease over 2022	
Illegal dumping	107
39% increase over 2022	
Missed collection	11
15% decrease over 2022	

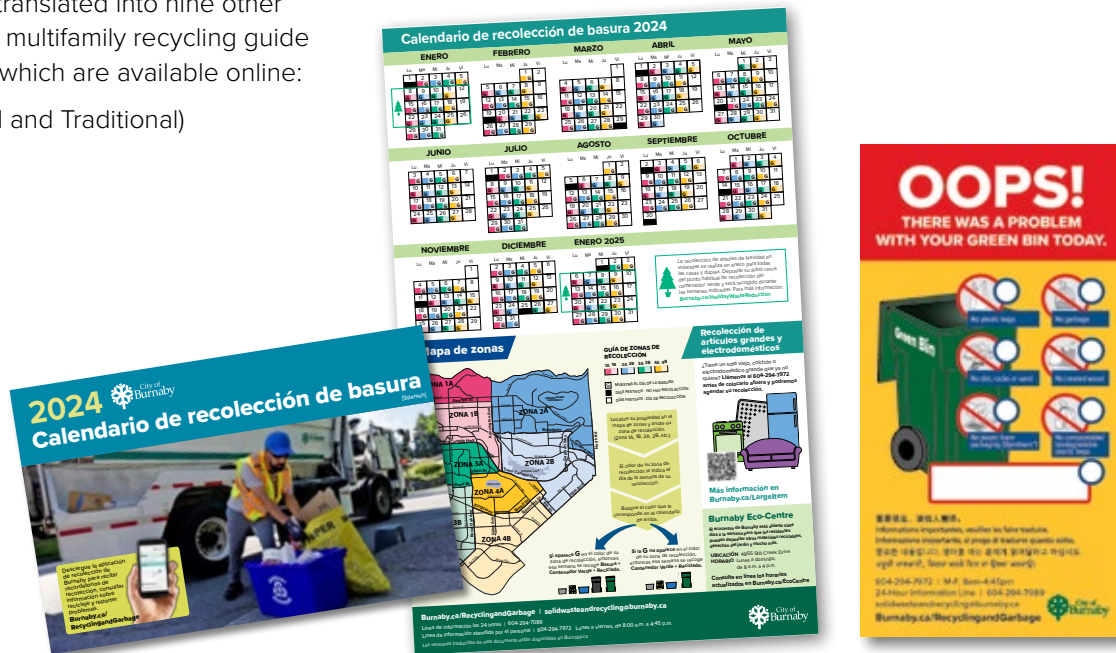
Social Media, Web and Print Campaigns

Recycling and garbage continue to be among the top-searched topics on the City’s website. As such, when the City’s website was updated in August 2021, Solid Waste and Recycling content was selected to be the first category listed in the Services and Payments menu and continues through 2023. In the past year, we also expanded our digital and print presence through consistent social media posts and vibrant posters on our collection vehicles. Highlights from this year’s social media, web and print campaigns include:

- » Distributed our 2023 Curbside Collection Calendar. The double-sided, single-sheet calendar and recycling guide was distributed to all houses, duplexes, and row-houses in December 2022. The calendar was translated into nine other languages and the multifamily recycling guide into six languages which are available online:

- Chinese (Simplified and Traditional)
- Farsi
- French
- Italian
- Korean
- Punjabi
- Spanish
- Tagalog

- » Improved our Oops stickers to inform and educate residents when common waste and recycling issues are noted on collection day
- » Updated some of the educational posters on our collection trucks. In addition to the Wrap Your Food Scraps in Paper, Please and Put Waste in its Place diversion campaigns, our collection trucks servicing Burnaby’s federally-mandated Japanese Beetle Regulated Areas began to carry educational posters on the regulations for residents living in these neighbourhoods.



KEEP PLANTS WITH SOIL ATTACHED ON SITE

Prevent the spread of invasive species (*Popillia japonica*)

Report sightings: 604-292-5742 | Learn more: [Burnaby.ca/JapaneseBeetle](https://burnaby.ca/JapaneseBeetle)








Community Events and Seasonal Outreach Campaigns

The City hosted five community litter cleanup events in partnership with Green Teams of Canada, May to September in 2023. In total, 464 people joined us to collect 419 kg of litter from the neighbourhoods around City recreation facilities. The partnership helped reach out farther to all corners of the City, and even encouraged residents of neighbouring municipalities to come out and volunteer.

We participated in 20 community events across Burnaby in one or more ways through educational outreach, litter pick-up and/or traffic support. There was support provided to nine resident led community clean-ups, including the Global Ismaili CIVIC Day event where our team provided equipment, pick-up of collected litter, and disposal.

Other outreach initiatives include:

- » 5 outreach talks provided to Burnaby elementary schools, scouts and not-for-profit groups
- » 3 tours of the Eco-Centre for local community groups
- » Still Creek Works Yard hosted a Burnaby Visually Impaired Student Traffic Safety Fieldtrip in partnerships with Translink, Burnaby RCMP and Burnaby schools

Our community litter pickup Adopt-A-Street program was created in 2022 and has grown steadily since then, reaching over 100 volunteers in 2023. To better manage this influx of volunteers, an improved database was implemented in 2023, along with the webpage, application and interactive street map. Together, these improvements will better support volunteers interested in helping clean up litter along boulevards, streets and lanes. There are plans to introduce Adopt-A-Street signs to showcase the great volunteers dedicating their time to keep the city clean and litter-free.

Throughout the year, the City actively promotes seasonal waste diversion campaigns. During November and December, a dedicated Holiday Waste Reduction webpage showcased ideas for diverting holiday related packaging and food waste. The page also provided information about the City's special Christmas tree collection service to encourage proper tree recycling. This information was also visible on the calendar on the mobile app, and a notification was sent out to draw attention to this service.





7.0 LOOKING AHEAD TO 2024

The City has successfully met environmental challenges over the years by developing innovative solutions while maintaining our commitment to environmental protection. Looking ahead to 2024 brings forward enhancements to Burnaby's waste reduction programs that will further strengthen our waste reduction goals. In 2024, we're planning to:

- » put into the production the first Battery Electric Collection Vehicle. This vehicle will help the City reach its climate action goals for carbon neutrality in fleet operations by 2024. This truck can reduce carbon dioxide tailpipe emissions by 60 tonnes annually.
- » explore development of bin-level sensor technology in the streetscape receptacles to enhance collection efficiently. These sensors will help us to optimize servicing frequency and allocate pickup resources.
- » continue to test and pilot various streetscape bin enclosure designs that will allow for flexibility in the number of recycling streams as well as compatibility with our automated collection trucks
- » expand the Adopt-A-Street program – with signs dedicated to the volunteers – encouraging more community members to get involved and draw attention to their hard work
- » further enhance the Bear Area program and continue research on bear-resistant equipment to further reduce waste-associated wildlife encounters
- » continue to conduct waste composition audits and use our findings to set priorities for contamination and diversion programs focusing on our multifamily and ICI sectors
- » significantly increase the number of streetscape receptacles available throughout the City, with a focus on expanding the 3-stream SilverBox™ bins at transit stops



Keeping Burnaby Beautiful

ADOPT-A-STREET
Burnaby



Who can participate?
All are welcome! Volunteer as an individual, family, business, organization, or as part of a group of friends or neighbours.

What is involved?
As an Adopt-a-Street volunteer, you will collect small amounts of litter from streets, boulevards and lanes at least once a month for a year.
We'll provide the tools and supplies you need, including safety vests, litter pickers, gloves, buckets and bags. You are required to wear the safety vest and gloves while cleaning.

Why participate?
Our volunteers are community champions who:

- » make our city look healthy and vibrant
- » join a great cause and create a sense of community and purpose for friends, family and colleagues
- » help protect our waterways by reducing pollution in storm water runoff
- » set a great example for others to follow

Visit Burnaby.ca/AdoptAStreet to sign up to keep your neighbourhood beautiful!



REDUCE REUSE RECYCLE



April 4, 2024
Printed on recycled paper

ENGINEERING DEPARTMENT
engineering@burnaby.ca
604-294-7460
4949 Canada Way, Burnaby, BC V5G 1M2

