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# SOLID WASTE DIVISION REPORT

2010



Solid Waste Management Branch  
City of Vancouver Engineering Services

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## SUMMARY: FREQUENTLY ASKED QUESTIONS

### Who collects what type of solid waste materials in Vancouver?

Material	Single Family Dwellings (4 units or less)	Multi-Family Dwellings (apartments and condos)	Light-Industrial, Commercial, Institutional (ICI)	Demolition Landclearing, Construction (DLC) Sites	Public Realm <sup>1</sup>
Garbage	City of Vancouver Sanitation Services (~100,000 units)	Private sector waste haulers	Private sector waste haulers	Private sector waste haulers	City of Vancouver Sanitation Services
Recycling <sup>2</sup>	City of Vancouver Sanitation Services (~100,000 units)	City of Vancouver Sanitation Services (~58,000 suites) and private hauler under contract with City (~103,000 suites)	Private sector waste haulers	Private sector waste haulers	City of Vancouver Sanitation Services
Yard Trimmings	City of Vancouver Sanitation Services (~100,000 units)	Primarily private sector landscape maintenance companies and waste haulers	Private sector landscape maintenance companies and waste haulers	Private sector waste haulers	Vancouver Park Board
Food Scraps	City of Vancouver Sanitation Services (~100,000 units)	Private sector waste haulers from limited number of properties	Private sector waste haulers from limited number of properties	N/A	Options for special events are under review

### Of the sectors the City collects from, how much material is collected?

Table 1: 2010 Summary of Materials Collected in City's Residential Collection Program

Material	Tonnes
Garbage	63,260
Recycling <sup>3</sup>	30,317
Yard Trimmings (& Food Scraps as of April 22, 2010)	24,530

Table 2: Historical Summary 2006-2010

Material	Quantity (tonnes)					
	2006	2007 <sup>4</sup>	2008	2009	2010	5 Year Average
Single Family Residential Garbage Collection	62,759	55,090	62,152	64,430	63,260	61,540
Single and Multi-Family Residential Recycling Collection <sup>5</sup>	32,492	29,482	33,342	32,011	30,317	31,530

<sup>1</sup> Streets, lanes, sidewalks, parks, beaches, seawalls and City organized special events.

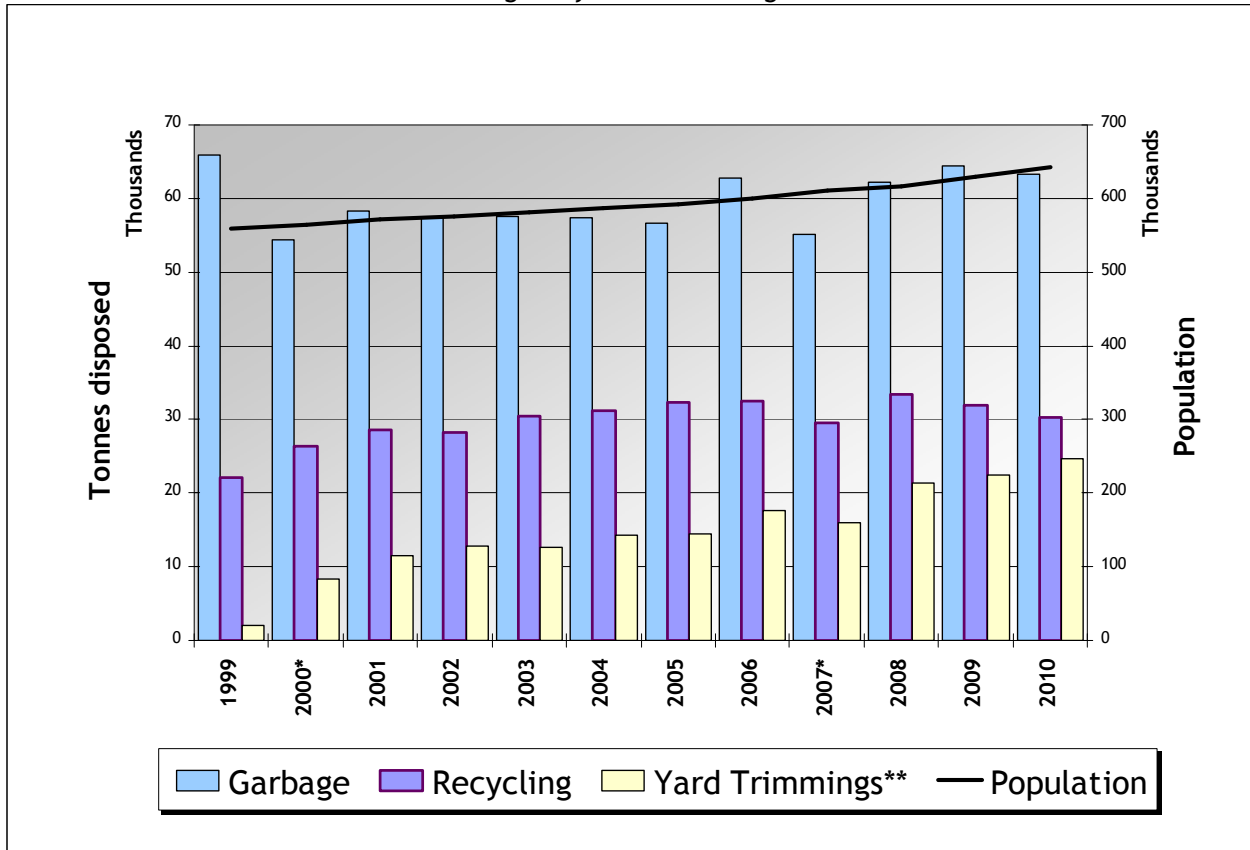
<sup>2</sup> Does not include materials collected under Product Stewardship Take-Back program.

<sup>3</sup> Includes materials collected from multi-family recycling program by City contracted waste hauler.

<sup>4</sup> City 2007 labour stoppage from July to October.

Single Family Residential Yard Trimmings Collection <sup>6</sup>	17,700	15,950	21,400	22,400	24,530	<b>20,400</b>
Abandoned Garbage	1,208	1,119	1,066	1,142	1,156	<b>1,140</b>
Street Litter <sup>7</sup>	3,442	6,686	3,708	3,378	4,738	<b>4,390</b>
Fall Leaf Program <sup>8</sup>	3,572	3,612	4,740	3,240	3,881	<b>3,809</b>

Chart 1: Annual Materials Collected through City Collection Programs



\* Labour disruption in these years

\*\* Includes limited food scraps starting April 22, 2010

### *How much recyclables are collected at City operated Recycling Depots?*

The City operates a recycling depot at the Vancouver South Transfer Station and a residential drop off area at the Vancouver Landfill. Various recyclable items that are not collected through the residential collection program can be dropped off for recycling at these locations.

<sup>5</sup> Includes materials collected from multi-family recycling program by City contracted waste hauler.

<sup>6</sup> Includes limited food scraps starting April 22, 2010.

<sup>7</sup> Includes materials collected from Olympics in February 2010 and from Park Board properties starting July 2010.

<sup>8</sup> Data from start of October to end of January of subsequent year.

Table 3: 2010 Recyclable Tonnages Dropped Off at City Facilities

Accepted Recyclable Items	Recycling Depot (Transfer Station)	Residential Drop-Off Area (Landfill)
	<i>Tonnes (unless specified)</i>	
Cardboard	803	986
Gypsum drywall	159	1,806
Household batteries & cell phones	137 kg	205 kg
Lead acid batteries	32	30
Mixed paper	878	81
Old newspapers	200	
Paint, solvent, aerosol	2	5.4
Plastic containers	40	0.4
Propane tanks	1,030 units	886 units
Refrigerators, freezers & air conditioners	4,721 units	2,142 units
Scrap metal	3,247	1,924
Tires	Not Collected	72
Waste antifreeze	Not Collected	1,640 L
Waste oil	Not Collected	13,640 L
Waste oil filters	Not Collected	11 drums

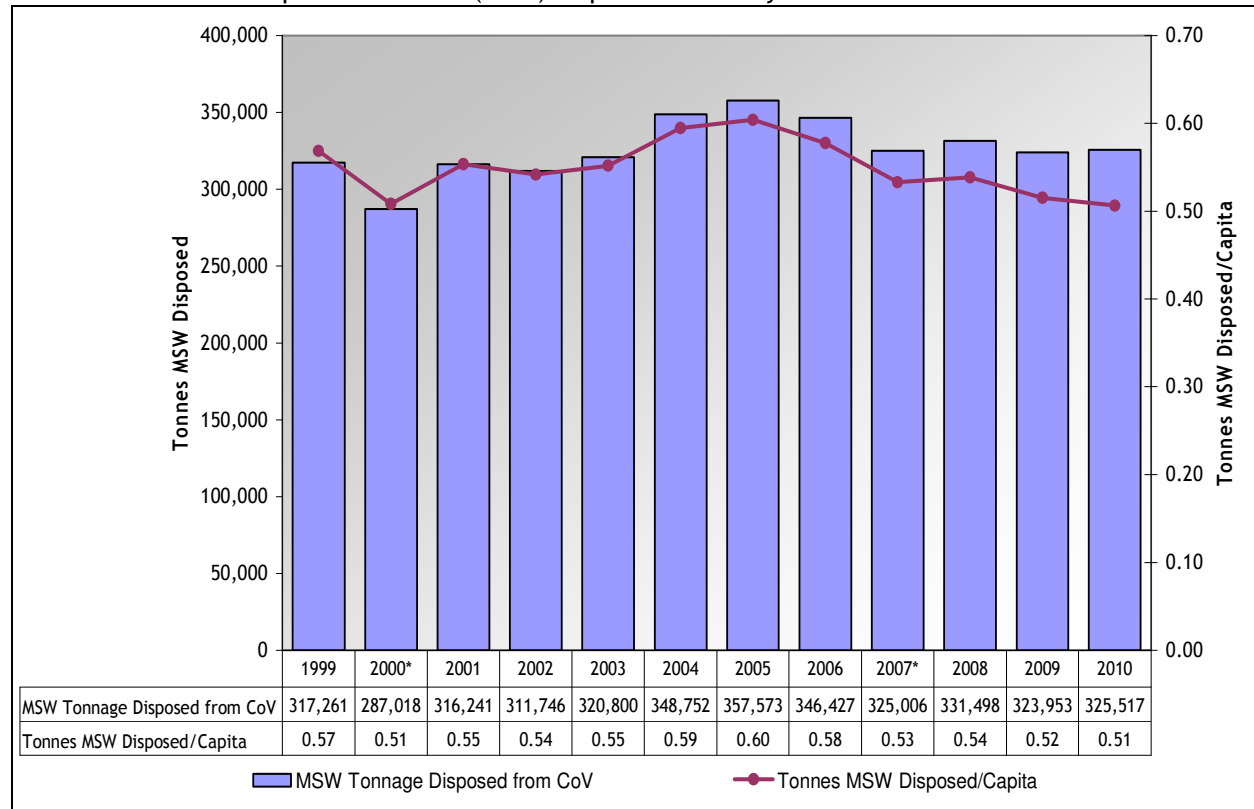
### *How much Vancouver solid waste is disposed?*

Table 4: 2010 Summary

Total population	642,843
Total garbage disposed (residential & ICI sectors) <sup>9</sup>	325,517 tonnes
Disposed per capita	0.51 tonnes/capita-year

<sup>9</sup> Includes garbage disposed from City of Vancouver residential and ICI sectors, at all regional facilities. Excludes DLC waste.

Chart 2: Annual Municipal Solid Waste (MSW) Disposed from City of Vancouver<sup>10</sup>



\* Labour disruption in these years

Between 2006 and 2010 an average of 330,500 tonnes per year of MSW (excluding DLC waste) originating from Vancouver was disposed. While Vancouver’s population grew from 590,000 people to over 640,000 people, the per-capita MSW disposed remained below 0.6 tonnes per person.

### How much solid waste is diverted from disposal?

Approximately 55%, and that rate has remained relatively constant over recent years.

Table 5: 2008 Metro Vancouver Municipal Solid Waste<sup>11</sup>

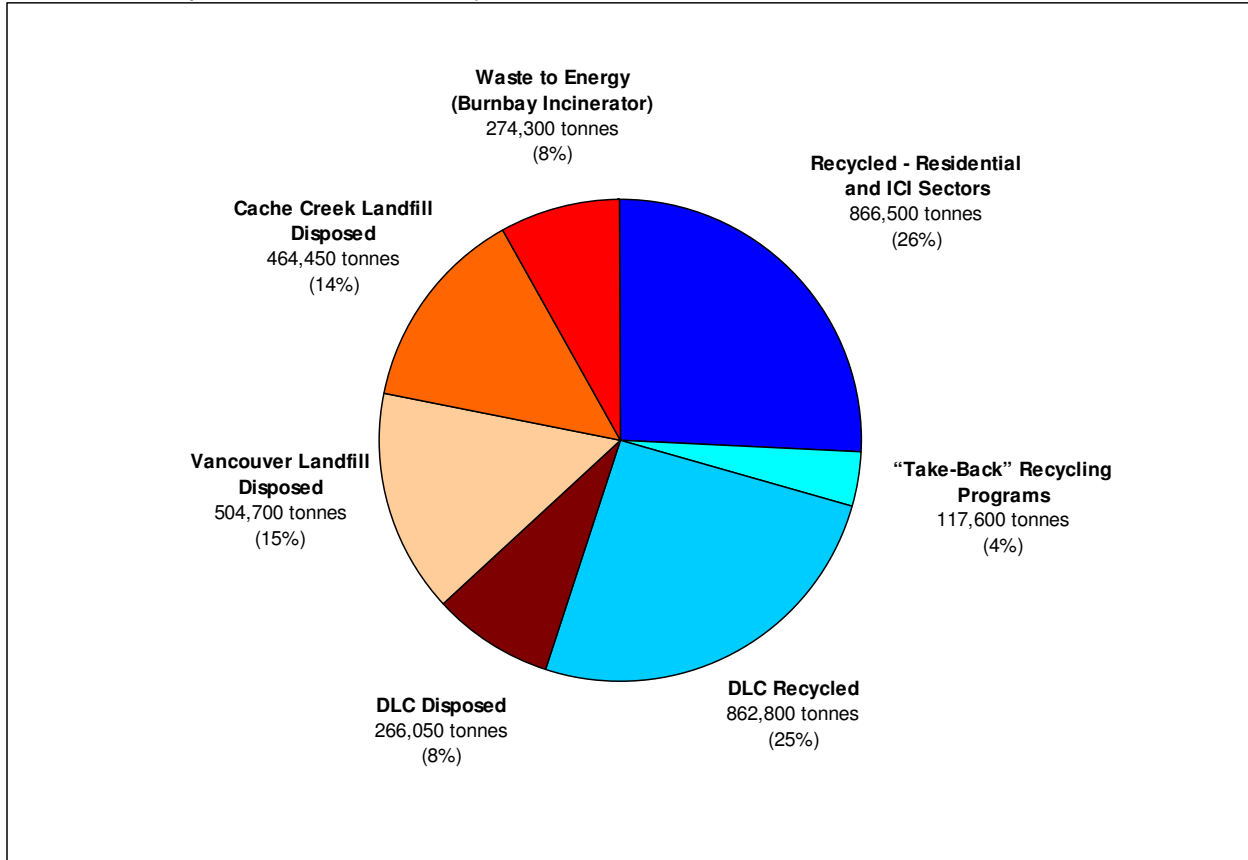
Sector	Total Waste Generated		Disposed		Recycled		Recycling Rate (%)
	(tonnes)	(% of total)	(tonnes)	(% of total)	(tonnes)	(% of total)	
Residential	777,730	23%	417,690	28%	360,040	19%	46%
Institutional, Commercial & Light-Industrial (ICI)	1,341,950	40%	815,500	54%	526,450	28%	39%
Demolition, Landclearing & Construction (DLC)	1,128,850	34%	266,045	18%	862,805	46%	76%
Product Stewardship (“Take-Back”) Programs	117,600	3%	-	-	117,600	6%	-
<b>TOTAL</b>	<b>3,366,130</b>		<b>1,499,235</b>		<b>1,866,895</b>		<b>55%</b>

<sup>10</sup> Excludes DLC waste. Includes all garbage disposed from City of Vancouver residential and ICI sectors at all regional facilities.

<sup>11</sup> From all municipalities in Metro Vancouver.

## How much solid waste is managed in the Region?

Chart 3: Municipal Solid Waste and Recyclable Material in Metro Vancouver, 2008<sup>12</sup>



## What is in our waste?

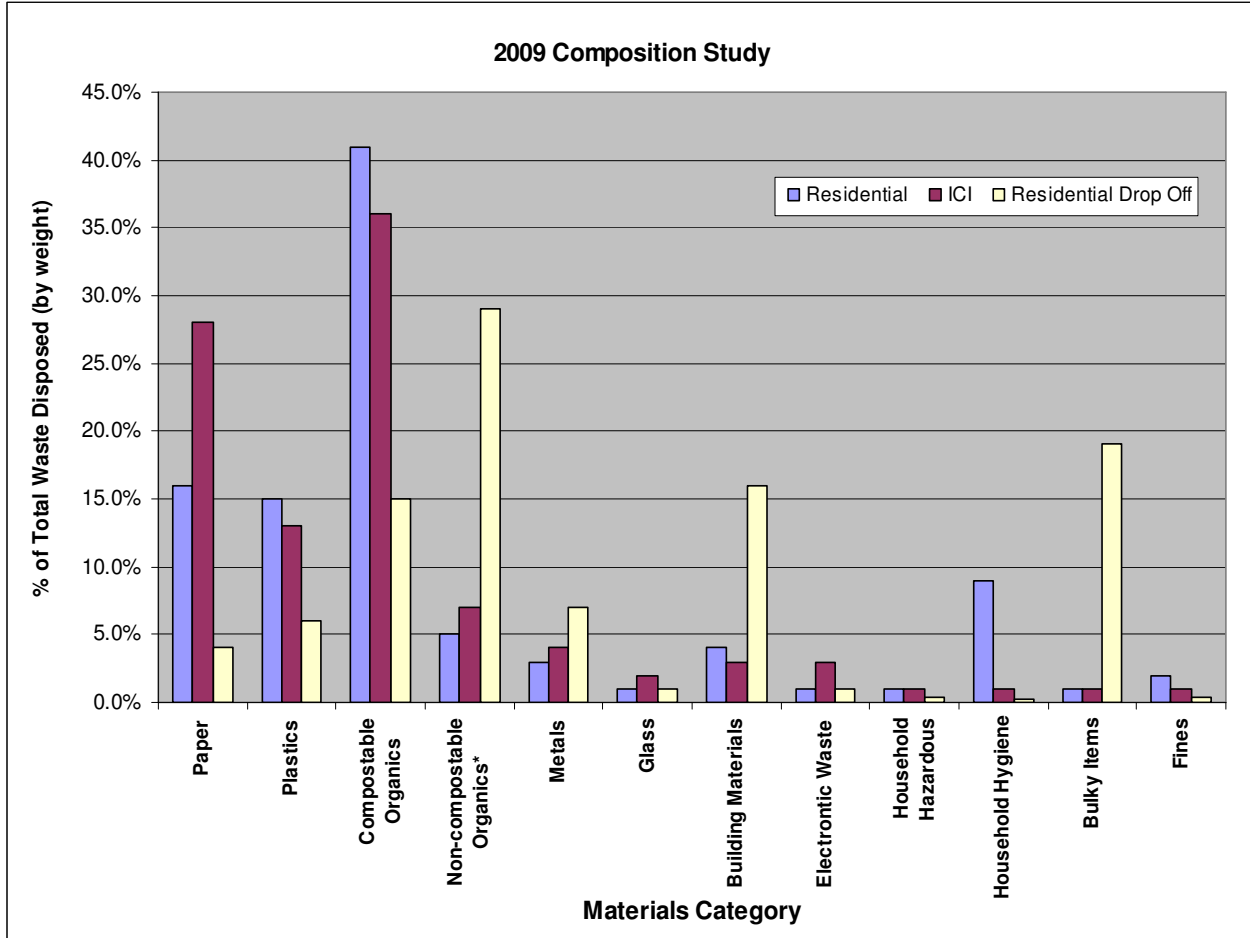
Chart 4 shows the overall composition of materials disposed in Metro Vancouver in 2009. Some of the materials entering the disposal stream are recyclable and can, with additional recovery efforts, be diverted through existing or new recycling programs. Other materials in the disposal stream do not have recycling value currently, but may have potential for recovery of energy.

Chart 5 shows the overall composition of materials recycled in Metro Vancouver in 2008.

<sup>12</sup> From 2008 waste composition data and study by Metro Vancouver.

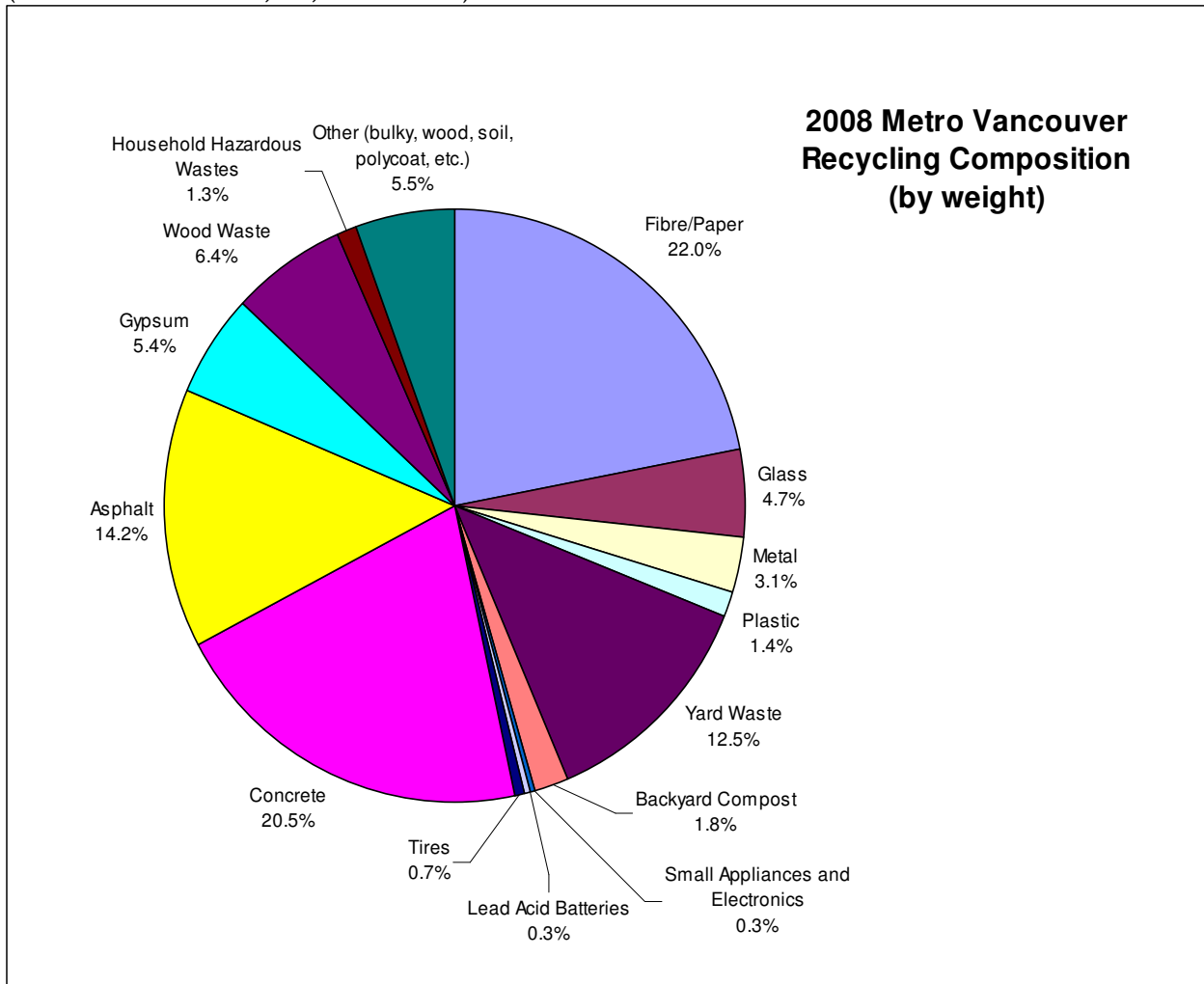


Chart 4: 2009 Metro Vancouver Materials Composition Study Results: Waste Disposed to Landfill and Incinerator



\* Includes textile, leather, rubber, multiple/composite

Chart 5: 2008 Metro Vancouver Materials Composition Study Results: Materials Diverted for Recycling (combined Residential, ICI, DLC sectors)



**Where can I find more information?**

CoV Greenest City

<http://vancouver.ca/greenestcity/index.htm>

CoV Solid Waste

<http://vancouver.ca/engsvcs/solidwaste/index.htm>

CoV Solid Waste By-Law #8417

<http://vancouver.ca/bylaws/8417c.PDF>

Metro Vancouver

<http://www.metrovancouver.org>

Recycling Council of BC

<http://rcbc.bc.ca/>

Product Stewardship Programs

<http://www.env.gov.bc.ca/epd/recycling/index.htm>

## INTRODUCTION

This report provides an overview of the activities and achievements of the Solid Waste Division in 2010 with specific focus on work carried out by the Solid Waste Management Branch and Vancouver Sanitation Services. As required under the Vancouver Landfill's Operational Certificate, the Transfer & Landfill Operations Branch produces a separate annual Vancouver Landfill report, available online at: [www.vancouver.ca/engsvcs/solidwaste/landfill/report.htm](http://www.vancouver.ca/engsvcs/solidwaste/landfill/report.htm). That report serves as Appendix 1 to this report.

Municipal Solid Waste (MSW) referred to in this report consists of all garbage, recycling, and yard trimmings received from City of Vancouver residential, commercial and institutional sources at all waste disposal facilities within Metro Vancouver. Demolition and Construction Waste (DLC) is excluded from MSW in this report. The Transfer & Landfill Operations Branch administers DLC waste and more information can be found in the Vancouver Landfill annual report.

## SOLID WASTE DIVISION RESPONSIBILITIES

The Solid Waste Division of Engineering Services plans, designs, builds, improves, manages, maintains, and coordinates solid waste collection, diversion, transfer, disposal and street cleaning activities, programs, projects and facilities for the City of Vancouver.

The Solid Waste Division is organized into three branches, as outlined in Table 6:

Table 6: Branch Responsibilities

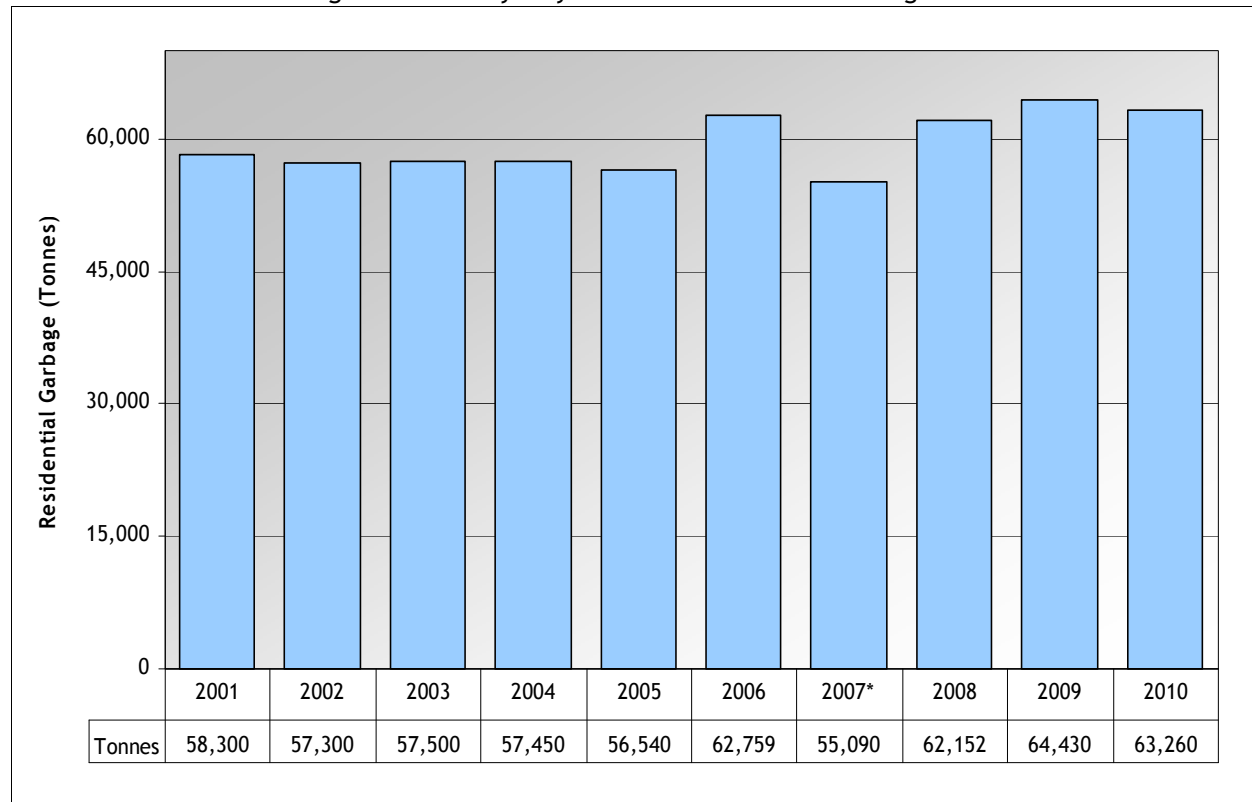
Solid Waste Management	Sanitation Services	Transfer & Landfill Operations
<ul style="list-style-type: none"> <li>Plans, designs and manages implementation of Solid Waste Utility collection, reduction and recycling programs.</li> <li>Operates Clean Streets Program, including coordination of Keep Vancouver Spectacular activities; technical support for street cleaning operations; and inspection and enforcement of illegal dumping and commercial container license requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Collects and transports garbage and recycling (food scraps, yard trimmings and blue box program materials), primarily from the single family sector.</li> <li>Cleans litter and abandoned garbage from streets and lanes, and collects litter and recyclables from public receptacles including parks and beaches.</li> </ul>	<ul style="list-style-type: none"> <li>Operates the Vancouver South Transfer Station (VSTS) and Vancouver Landfill (VLF, in Delta), including the management of various environmental protection systems and assets, a yard trimmings composting facility and public recycling depots.</li> </ul>

## RESIDENTIAL GARBAGE COLLECTION

The City provides residential garbage collection primarily to single family dwellings, duplexes, small (typically four or less dwelling units) apartment and condominium buildings, townhouses, and small businesses 50 times a year on a five day “skip-a-day” (advance one day for holidays) schedule. Most other properties including large multi-family buildings and commercial properties, are serviced by licensed private waste hauling companies.

Fully automated, cart based waste collection for single family residential properties was implemented City-wide in early 2006. Five different size carts are available ranging from 75 to 360 litres.

Chart 6: Residential Garbage Collected by City of Vancouver Annual Tonnages



\* Labour disruption

The 2010 Solid Waste Utility annual garbage collection rates were as follows:

Cart Size	2010 Fee
75 litres	\$89
120 litres	\$105
180 litres	\$128
240 litres	\$150
360 litres	\$194

For properties that receive garbage can collection service, the 2010 annual garbage collection fee was \$61 for each collection point and \$37 for each garbage can allocated or purchased.

## BLUE BOX & APARTMENT RECYCLING COLLECTION

The City provides residential recycling collection to single family properties and multi-family buildings 50 times a year on a five day “skip-a-day” (advance one day for holidays) schedule. The blue box recycling program provides single family dwellings, duplexes and some small apartment buildings (typically four or less dwelling units) with blue boxes for the collection of mixed recyclable containers (e.g. metal cans, glass and plastic bottles, etc.), blue bags for newsprint, and yellow bags for mixed paper products. These recyclables are collected manually by City crews and delivered to a contracted recycling materials processing and marketing company. The materials are then sold as commodities to recycling industries for remanufacture into new products. Revenue from the sale of the material is shared with the City, and this is used to offset the cost of the recycling collection program.



For the apartment recycling program, the City provides multi-family buildings with wheeled carts, instead of boxes and bags, for the three material streams. The contents of the carts are collected semi-automated - the carts are manually attached to the truck and then mechanically tipped. The City contracts a portion of the apartment recycling collection program to a private waste hauler.

Figure 1: Contracted Areas for Apartment Recycling Program

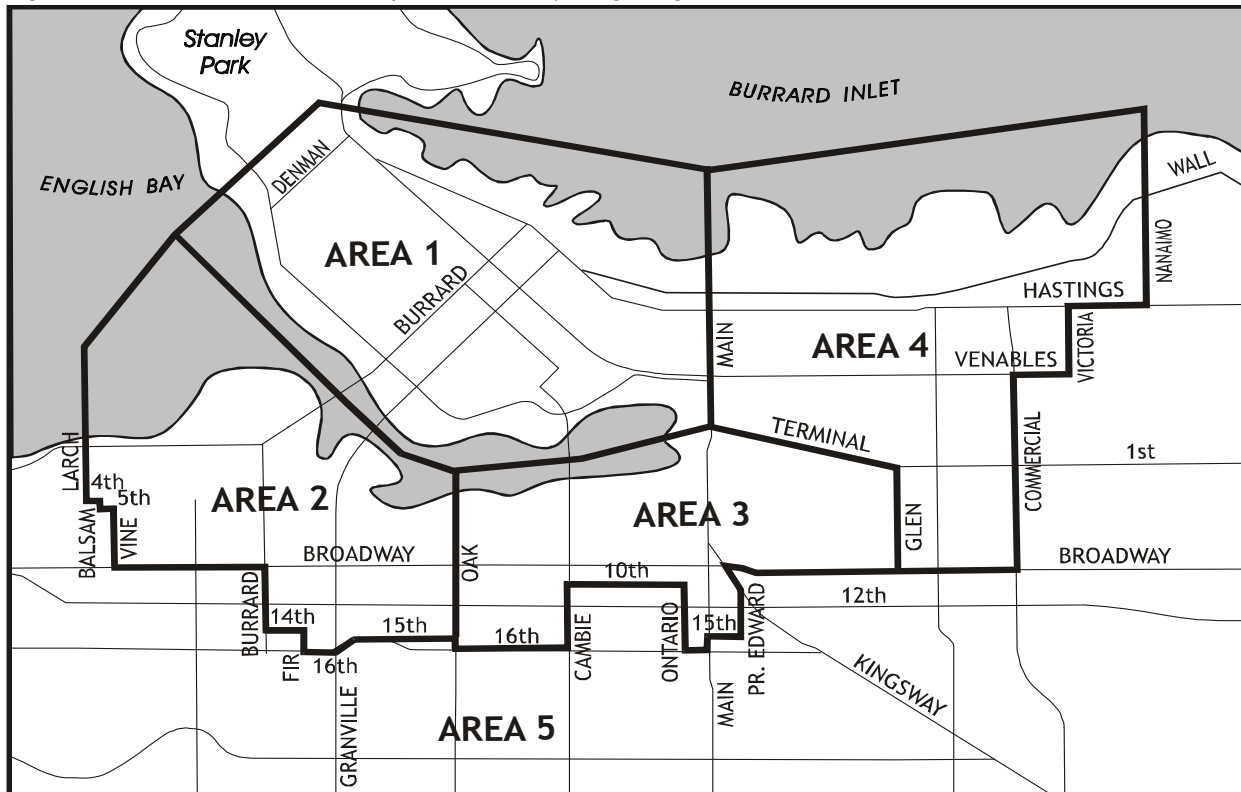
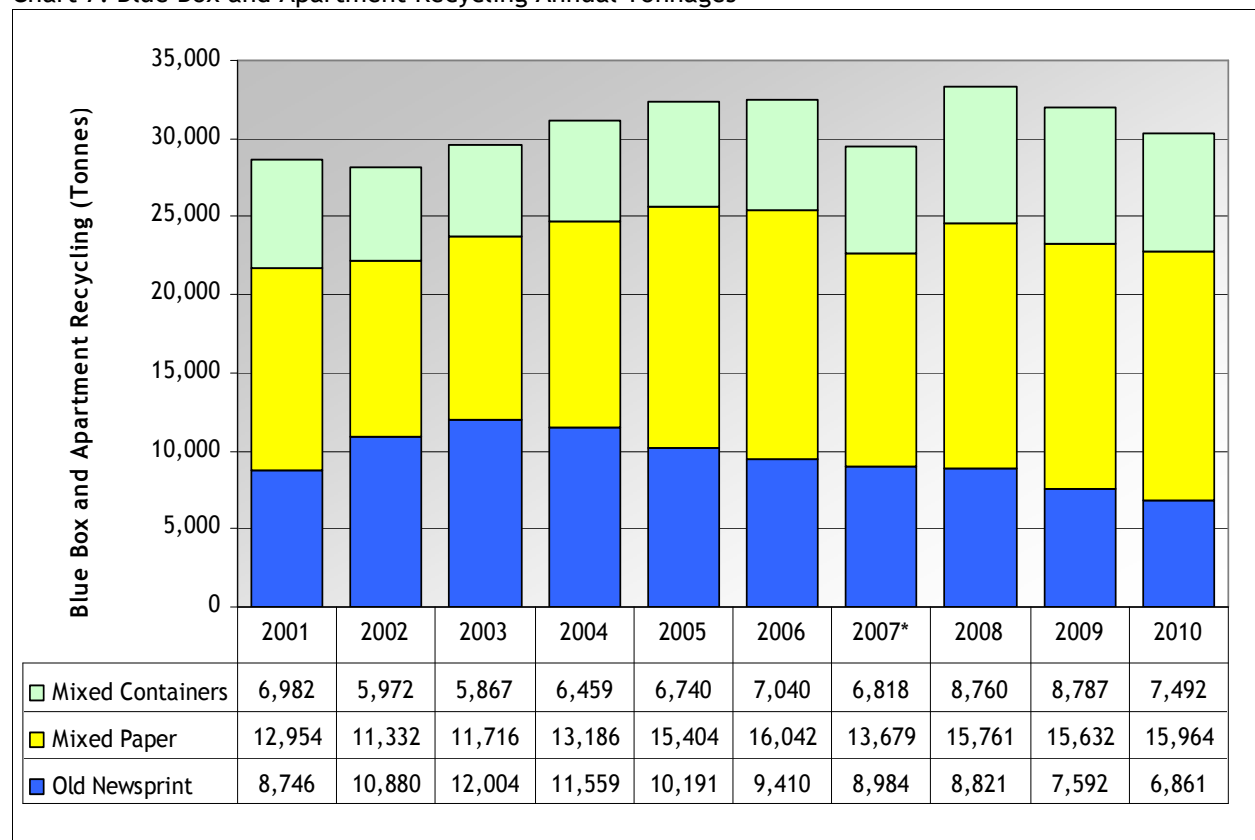


Table 7: 2010 Apartment Recycling Tonnages Collected in Different Areas

Area	Served By	Number of Buildings	Number of Suites	2010 Recycling Tonnage Collected from Area
1	Waste Management of Canada	920	65,210	4,815
2		1,010	22,895	1,690
3		480	15,200	1,125
<b>CONTRACTED TOTAL</b>		<b>2,410</b>	<b>103,305</b>	<b>7,630</b>
4 & 5	<b>CITY CREWS TOTAL</b>	<b>2,575</b>	<b>57,885</b>	<b>4,275</b>

Vancouver's three stream sort-at-source recycling program results in a high quality recycling material commodity and significant revenue from the sale of the recyclables.

Chart 7: Blue Box and Apartment Recycling Annual Tonnages



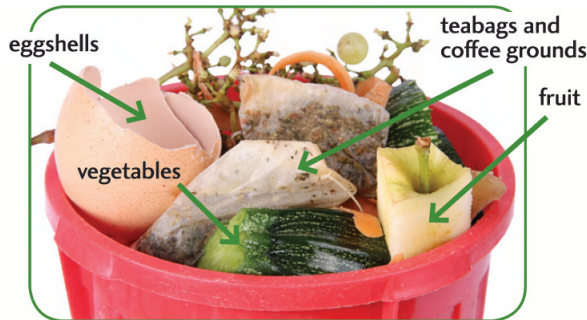
\* Labour disruption

The 2010 Solid Waste Utility annual recycling collection fee for each dwelling unit serviced was established as \$29, except where there is one or more common collection points (e.g. multi-family buildings) the rate was \$21 for each dwelling unit and \$8 for each collection point.

## RESIDENTIAL YARD TRIMMINGS & FOOD SCRAPS COLLECTION

The City provides residential yard trimmings collection to single family properties 25 times per year, bi-weekly (every other week).

Since April 22, 2010, residents have been able to place uncooked fruit and vegetable scraps, coffee grounds and filters, eggshells, and teabags into their yard trimmings cart for composting (refer to diagram below). Yard trimmings and food scraps collected from Vancouver residents are processed into compost at Fraser Richmond Soil & Fibre Ltd., Richmond. Options for expanding the program to include all types of food scraps and food soiled paper are being developed.

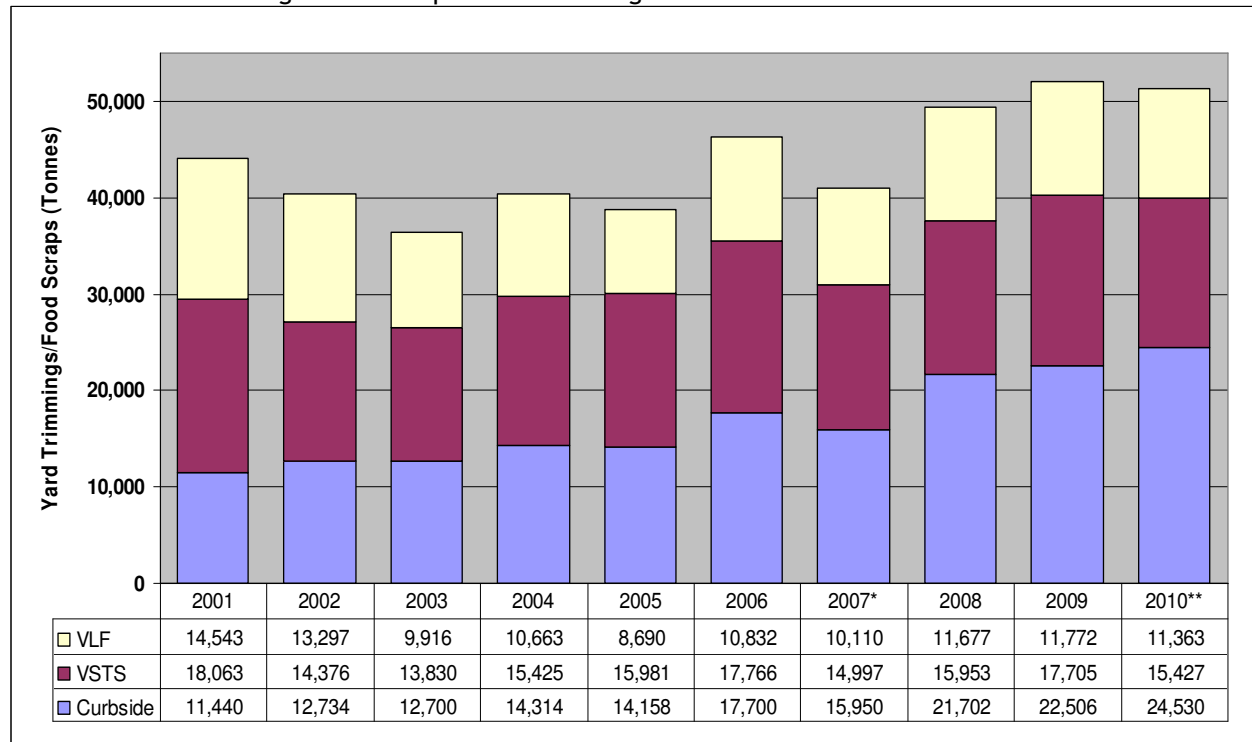


Yard trimmings (without food scraps) directly hauled by residents and contractors to the Vancouver Landfill (Landfill) and Vancouver South Transfer Station are processed into compost by the City at the Landfill's composting facility (Appendix 1).

Since 2006 a cart based fully automated program has been in place for single family residential yard trimmings/food scraps collection. Four different size carts are

available ranging from 120 to 360 litres. Chart 8 indicates the annual tonnage of organics managed by the City.

Chart 8: Yard Trimmings/Food Scraps Annual Tonnages



\* Labour disruption

\*\* Limited food scraps collection since April 22, 2010.

The 2010 Solid Waste Utility annual yard trimmings collection rates were as follows:

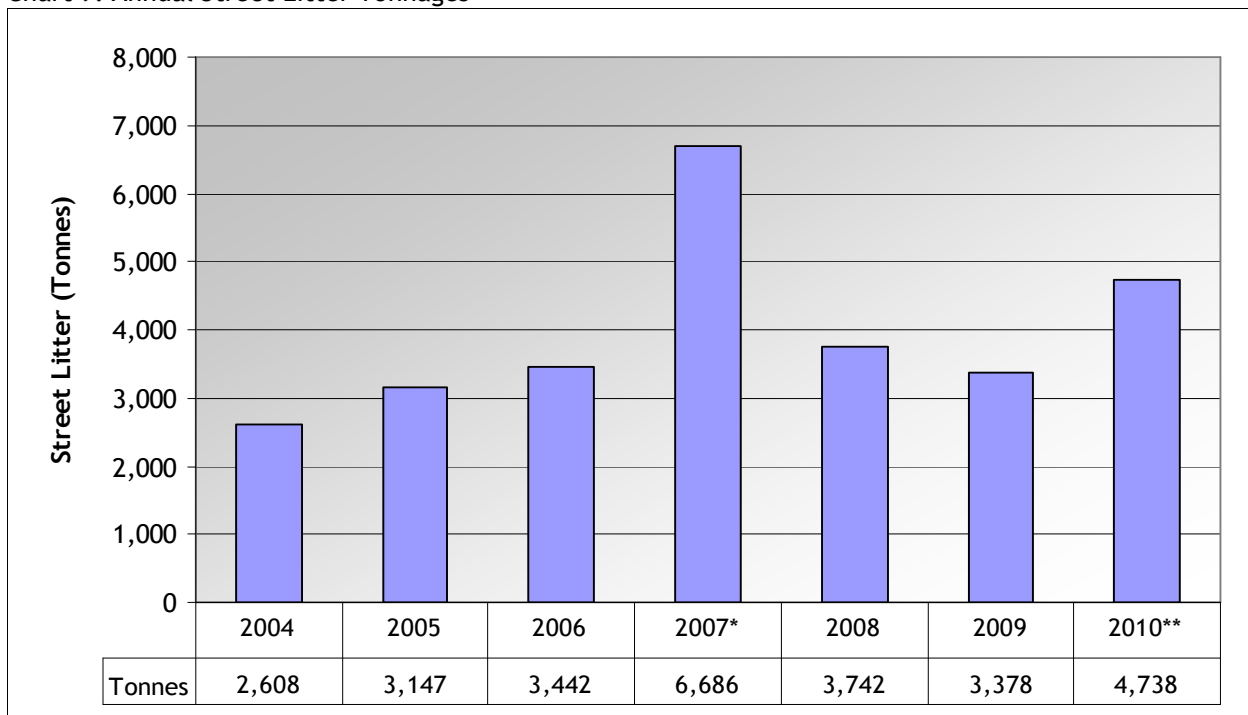
Cart Size	2010 Fee
120 litres	\$46
180 litres	\$54
240 litres	\$61
360 litres	\$75

## STREET CLEANING

The City provides street cleaning and public litter receptacle servicing. About 3,200 public litter receptacles are installed on sidewalks, seawalls, parks, and at bus stops throughout the City and are generally emptied daily. Hand cleaning (rake and shovel) is carried out, primarily in the downtown area, and abandoned garbage is cleaned up city-wide. Waste collected from street cleaning operations is transported to the Transfer Station and subsequently transferred to the Landfill for disposal.

Commercial and residential streets and lanes are mechanically cleaned by City staff with sweeper and flusher trucks. Residential streets are cleaned about twice a year by sweeper trucks, while arterial and downtown streets are cleaned more frequently. Extra cleaning is provided for major events, such as the Vancouver Marathon, Pride Parade and Celebration of Lights. Flusher trucks are used mainly at night to clean in the downtown and in downtown eastside lanes.

Chart 9: Annual Street Litter Tonnages



\* Labour disruption

\*\* Includes litter from Olympics in February and from Park Board starting in July



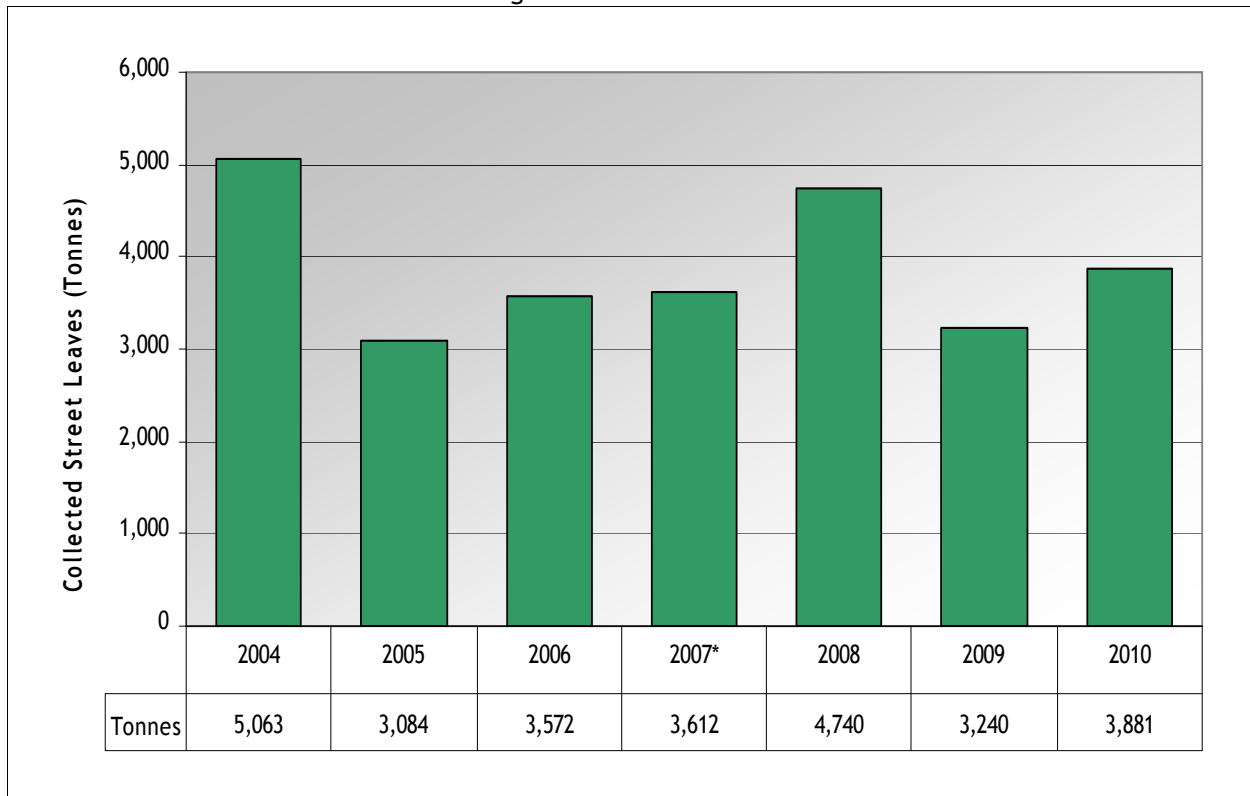
The City provides public recycling through different opportunities. On most public litter receptacles, recycling racks are available for recycling refundable beverage containers. Also, about 50 Multiple Publication News boxes (MPN) have been installed throughout the City and each MPN contains a newspaper recycling compartment. In 2010, about 10 tonnes of newsprint was collected and recycled from the MPNs. In addition, the City is currently working on increasing waste diversion opportunities at special events where various waste streams can be diverted using City customized Zero Waste stations.

## FALL LEAF REMOVAL

Annually between October 1 and January 31, unlimited quantities of leaves are picked up from single family properties as part of the fall leaf removal program and composted at the Vancouver Landfill. Leaves are also swept and removed from City streets during this period. To prevent fallen leaves from clogging storm drains during the fall and winter period, residents are encouraged to gather the leaves on their property, as well as on City boulevards and set them out for collection.



Chart 10: Annual Fall Street Leaves Tonnages



\* Labour disruption

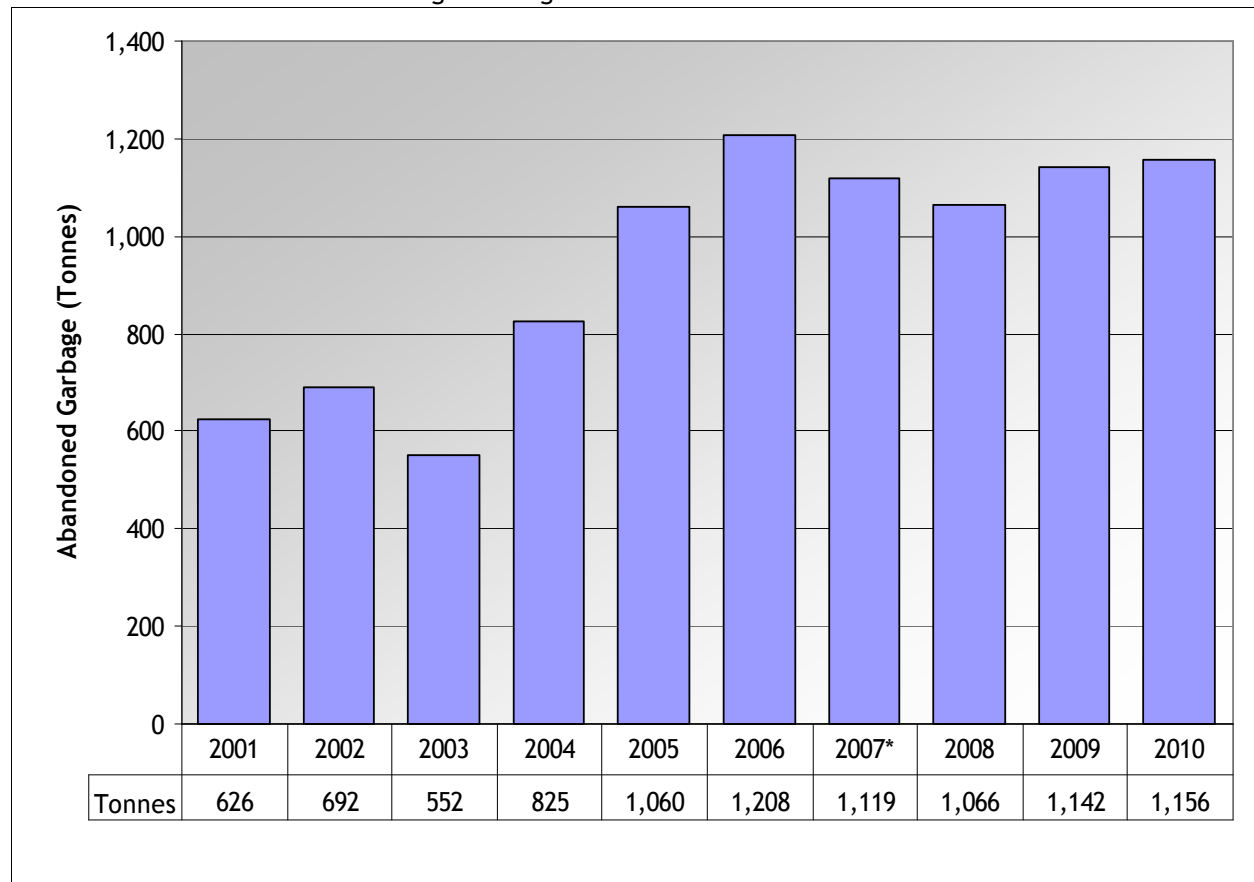
## ABANDONED GARBAGE CLEANUP

Abandoned garbage clean-ups are conducted by City crews primarily on an as needed or complaint basis. Frequently used illegal dumping locations in the City are routinely monitored and cleaned up as required.

The most common illegally dumped items include furniture (mattresses, couches) and appliances (refrigerators, washers, stoves). Street Use Inspectors from the Solid Waste Management Branch Clean Streets Team inspect abandoned garbage and pursue by-law enforcement when evidence is available.



Chart 11: Annual Abandoned Garbage Tonnages



\* Labour disruption

## HOME COMPOSTING PROGRAMS

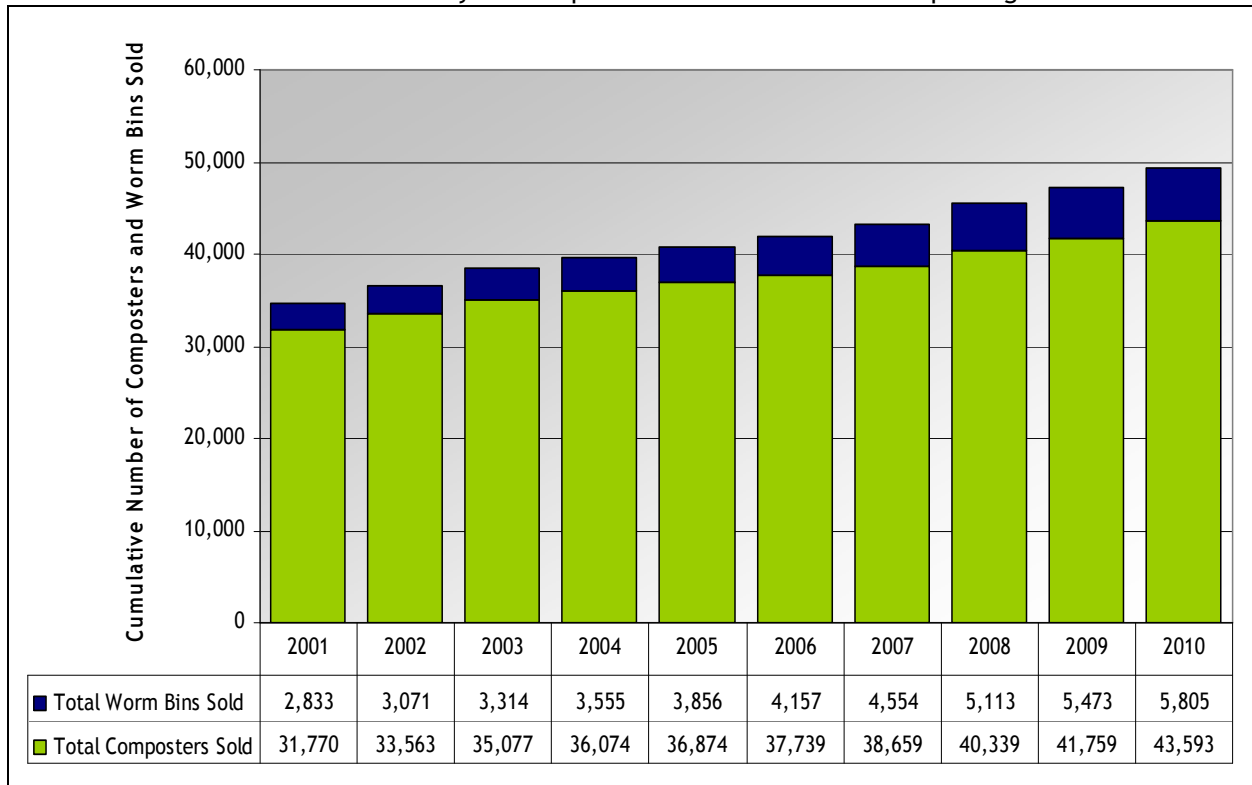
The City provides backyard composters and indoor worm composting bins to Vancouver residents at a subsidized rate of \$25. Backyard composters are available from the Vancouver South Transfer Station, and worm composting bins are available from the Vancouver Compost Demonstration Garden ([www.cityfarmer.info](http://www.cityfarmer.info)). On average, each backyard composter and worm composting bin can divert approximately 250 kilograms and 60 kilograms per year of organic waste from disposal, respectively.



At the end of 2010, a cumulative total of 43,593 backyard composters and 5,805 worm compost bins have been sold since the program began operating in 2001. Approximately 3.5 percent of apartment suites in the City have worm composting bins. Estimated continued use of worm composting bins is about 70 percent. Therefore the apartment home composting rate is about 2.4 percent. A public telephone survey conducted in mid-2007 indicated that about 43 percent of all ground level dwellings compost material. This rate includes backyard composters that have been homemade or

purchased from retail stores, as well as City-provided composters. It is estimated that about 5,700 tonnes per year of organic waste is diverted from disposal through backyard composting.

Chart 12: Cumulative Number of Backyard Composters and Indoor Worm Composting Bins Sold



## KEEP VANCOUVER SPECTACULAR

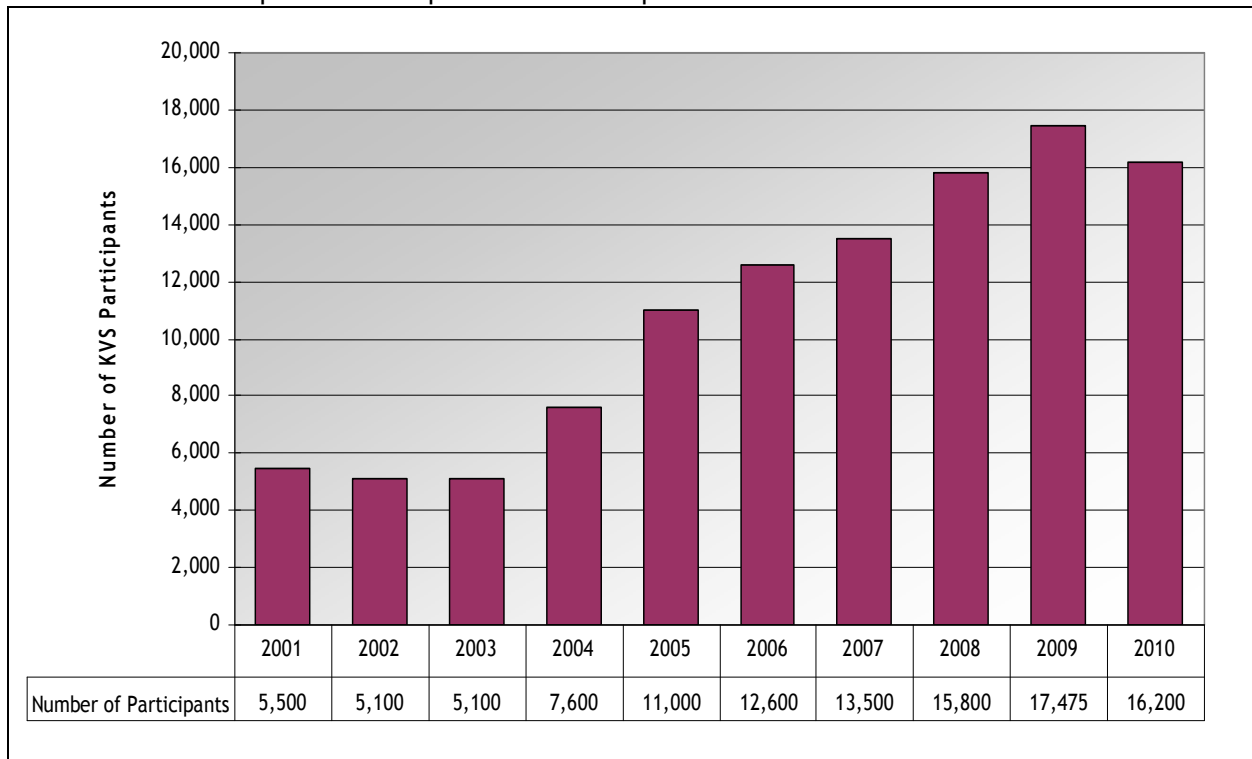
Keep Vancouver Spectacular (KVS) is an annual City-wide Spring campaign that brings together individuals, businesses and neighbourhood groups to participate in community clean-up projects on City streets, lanes and other public areas. By removing garbage and graffiti in their own neighbourhood, citizens gain a sense of community pride and help make Vancouver a great place to live. Most KVS clean-up events take place in May, but there are community groups that organize clean-ups throughout the year.

The number of participants (volunteers) has increased significantly since the program was first introduced. Most of this increase is due to greater involvement of schools in the campaign. The number of participating students has increased from 6,000 in 2004, to 13,700 students from 63 schools in 2010, due to greater promotions of the program to schools.



During the May 2010 KVS campaign, approximately 16,200 volunteers participated in the annual event.

Chart 13: Annual Keep Vancouver Spectacular Participants



## NOTABLE INITIATIVES & EVENTS

The following initiatives and events were launched or completed in 2010:

- During the 2010 Winter Olympic and Paralympic Games, the City implemented a comprehensive street cleaning plan for managing the expected significant increase in litter generated and disposed in the public realm. The plan comprised of additional street cleaning beats, custom designed public litter and recycling receptacles, recycling initiatives in collaboration with a not-for-profit social enterprise organization, and a significant temporary increase in staff resources. Overall, the plan was a huge success in keeping the streets clean during the 17 days event.
- The City launched the initial phase of the residential food scraps collection program in April 2010. Vancouver residents can now add uncooked fruits and vegetable scraps, coffee grounds and filters, teabags, and eggshells, into the yard trimmings carts. The mixed yard trimmings and food scraps are sent to Richmond Fraser Soil & Fibre for composting. City staff are currently working on the second phase of the program involving an expansion to include all types of food scraps and food soiled paper.
- In 2010, Solid Waste Management Staff produced the “Solid Waste Storage Facility Design Supplement for Developments and Redevelopments”. This document is intended to assist planners and developers with the design of garbage and recycling storage facilities for new and retrofit buildings. The full document can be downloaded from [www.vancouver.ca/engsvcs/solidwaste/DesignSupplement.htm](http://www.vancouver.ca/engsvcs/solidwaste/DesignSupplement.htm).
- As part of the Vancouver Services Review, the City amalgamated the services of Park Board Sanitation Services with Engineering Services’ Sanitation Operation Branch. The creation of this new business unit, called Vancouver Sanitation Services, rationalizes how litter is collected in streets and parks throughout the City.
- In early 2009, City Council formed a Greenest City Action Team (GCAT) comprised of independent experts with range of knowledge and interest in environmental issues. Their goal was to develop a high-level strategic plan to make Vancouver the Greenest City in the world by 2020. Creating zero waste is identified as a long term goal with the plan. In 2010, GCAT launched the “Talk Green to Us” online forum to gather feedback and ideas from the general public on how to achieve GCAT goals, for the purpose of helping staff develop a specific action plan in 2011.
- Four additional Provincial Extended Producer Responsibility (EPR) programs were implemented in 2010. These take-back programs include compact fluorescent lights and tubes (LightRecycle), household batteries (Call2Recycle), mercury containing thermostats (Switch the ‘Stat), and an expanded list of accepted items for the existing Electronic Return-It program.
- In 2010, City staff worked with other stakeholders including Metro Vancouver, other municipalities, stewardship groups, and private industry to explore options for increasing the re-use and recycling of construction and demolition (C&D) materials. Promoting deconstruction over demolition was identified as a key opportunity. Deconstruction is the practice of systematically disassembling a building in order to maximize salvage and re-use of building materials, and achieve high levels of waste diversion. In November, City staff hosted a workshop on deconstruction featuring RE-USE Consulting, a company

specialized in deconstruction and salvage. Discussion was focused on deconstruction as a method to divert and re-use DLC waste while creating opportunities for “low threshold jobs” and “green” Community Economic Development. This work will help support the development of pilot studies and a policy planned for 2011.

- In December 2010, the City began a one year on-street Newspaper Recycling Pilot project. The pilot consists of temporary placement of 14 dedicated newspaper recycling receptacles along the Broadway Corridor. The information gathered during the pilot, such as servicing costs, level of contamination and the amount of material collected, will assist in developing strategies for a more extensive and permanent on-street newspaper recycling program.
- A one day City-wide backyard composter sale was held at four different locations in June to promote home composting and food scraps collection. Vancouver residents were able to purchase backyard composters, aerators, and kitchen catchers for food scraps at a subsidized rate.
- Since 2008, staff have been participating in a Metro Vancouver led process to develop a new Regional Solid Waste Management Plan. This initiative sets out aggressive new waste diversion actions and strategies with a goal of increasing regional waste diversion to a minimum of 70% by 2015, and with an aspiration goal of 80% diversion by 2020. The final Integrated Solid Waste and Resource Management Plan was submitted to the Provincial government for approval in late 2010.

## WORK CREW AND VEHICLE ORGANIZATION

During 2010, as part of the Vancouver Service Review initiative, Park Board Sanitation Services was amalgamated with the Engineering Services Sanitation Operations Branch to form Vancouver Sanitation Services. This new business unit is responsible for providing residential solid waste collection services as well as street cleaning services in the public realm, including streets, parks and beaches.

Table 8 summarizes the number of collection vehicles and crews used in 2010. Table 9 summarizes the street cleaning structure in 2010.

Table 8: Refuse and Recycling Collection Crews and Vehicle Inventory Summary

Collection Activity	2010	
	Daily Crews	Total Vehicles
Garbage	16: 1-person crews & 3: 2-person crews	29 Sterling Condor automated trucks, 4 GMC Chagnon rear load trucks, 5 Cordor rear load trucks, 2 modified Jitneys
Yard Trimmings	4 to 8: 1-person crews & 1 to 3: 2-person crews	
Recycling	On average 24 single-person crews	28 Labrie Mack & Topselect side-loaders, 1 Pickup

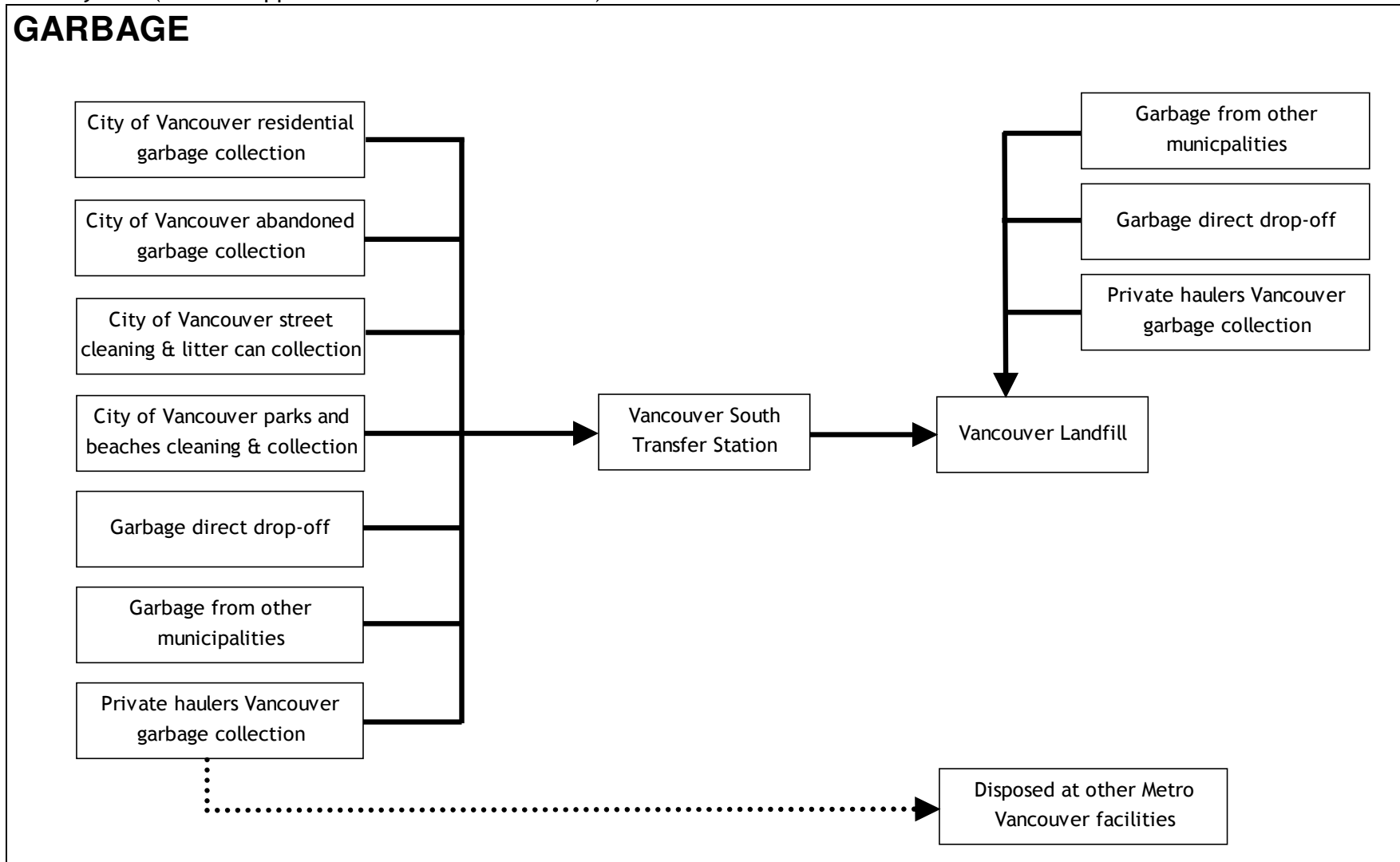
Table 9: 2010 Street Cleaning Crews and Vehicle Inventory Summary

<b>Crews</b>	<b>Day Shift</b>	<b>Afternoon Shift</b>	<b>Night Shift</b>	<b>Total</b>
Sweeper Operator	3	1	2	6
Flusher Operator	0	0	1	1
Abandoned Garbage Driver	4	0	3	7
Litter Can Truck Driver	0	0	4	4
Litter Can Maintenance Staff	0	0	2	2
Container Truck Driver	1	0	0	1
Cart Operator & Hand Cleaner	6	4	8	18
Supervisor	2	2	3	7
<b>TOTAL STAFF</b>	<b>16</b>	<b>7</b>	<b>23</b>	<b>46</b>

<b>Equipment</b>	<b>Quantity</b>
Larger Sweeper Trucks (for streets and lanes)	7
Medium Sweeper Truck (for bike routes)	1
Flusher Trucks (for streets and lanes)	3
Litter Can Trucks (public litter can program)	5
Power Washing Truck (for public litter can program)	1
Hand Carts (for sidewalk cleaning)	13
Motorized Litter Carts (pick up truck with dump box, primarily for cleaning bus stops)	15
Mini Sweepers (2 walk-behind, 1 drive for cleaning sidewalks)	3
Large Rear Load Packer Trucks (for various programs)	2
Small Rear Load Packer Truck (Fuso for Parks program)	2
Container Trucks (for abandoned garbage program)	2
Appliance Truck (for abandoned garbage program)	1
Supervisor Pickup	4
Tote Pull Truck	1
<b>TOTAL VEHICLES</b>	<b>60</b>

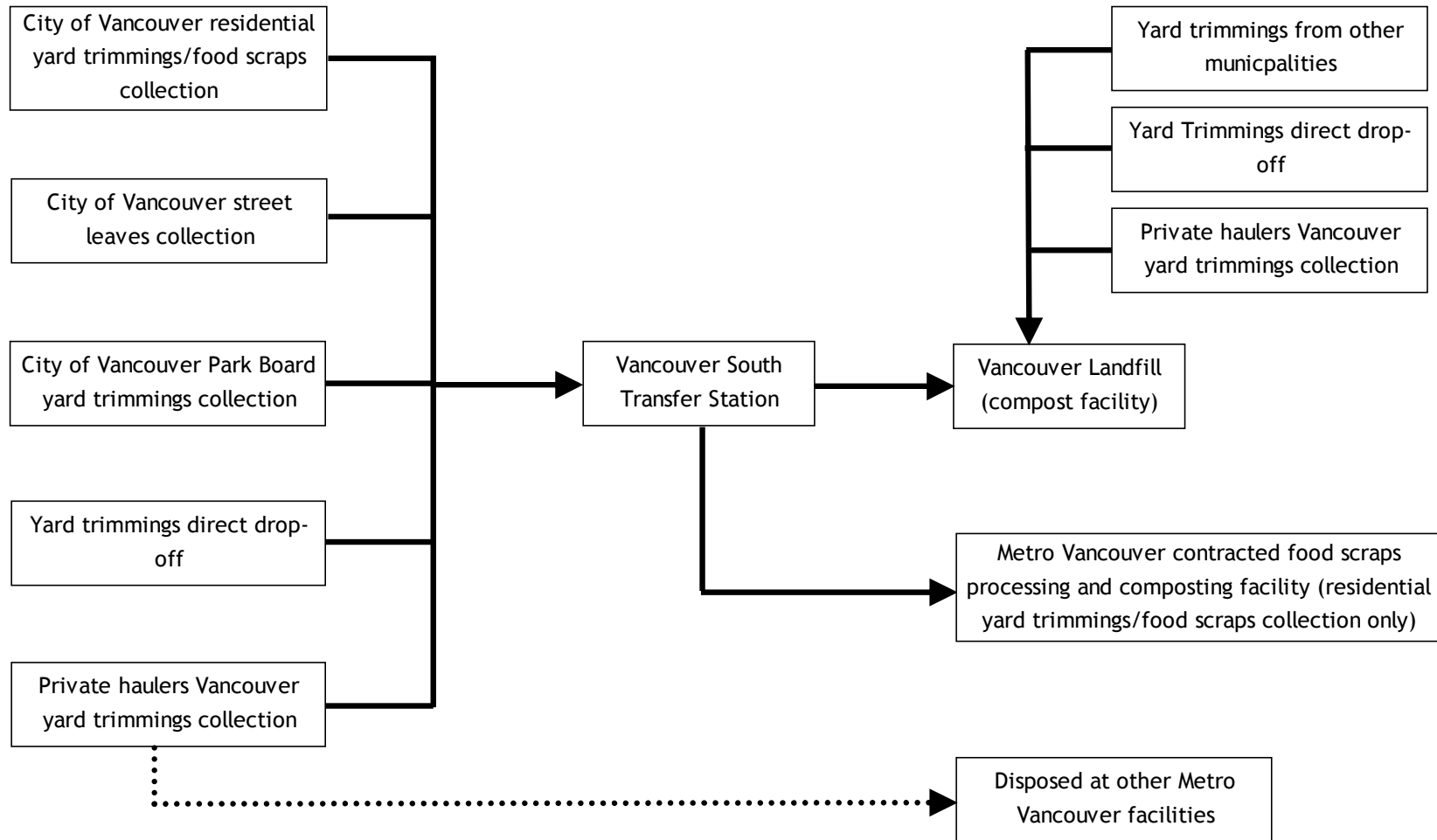
## CITY OF VANCOUVER SOLID WASTE FLOW CHART

The following charts summarize the flow of garbage, yard trimmings/food scraps and recycling materials within Vancouver's solid waste system (refer to Appendix 1 for more information)

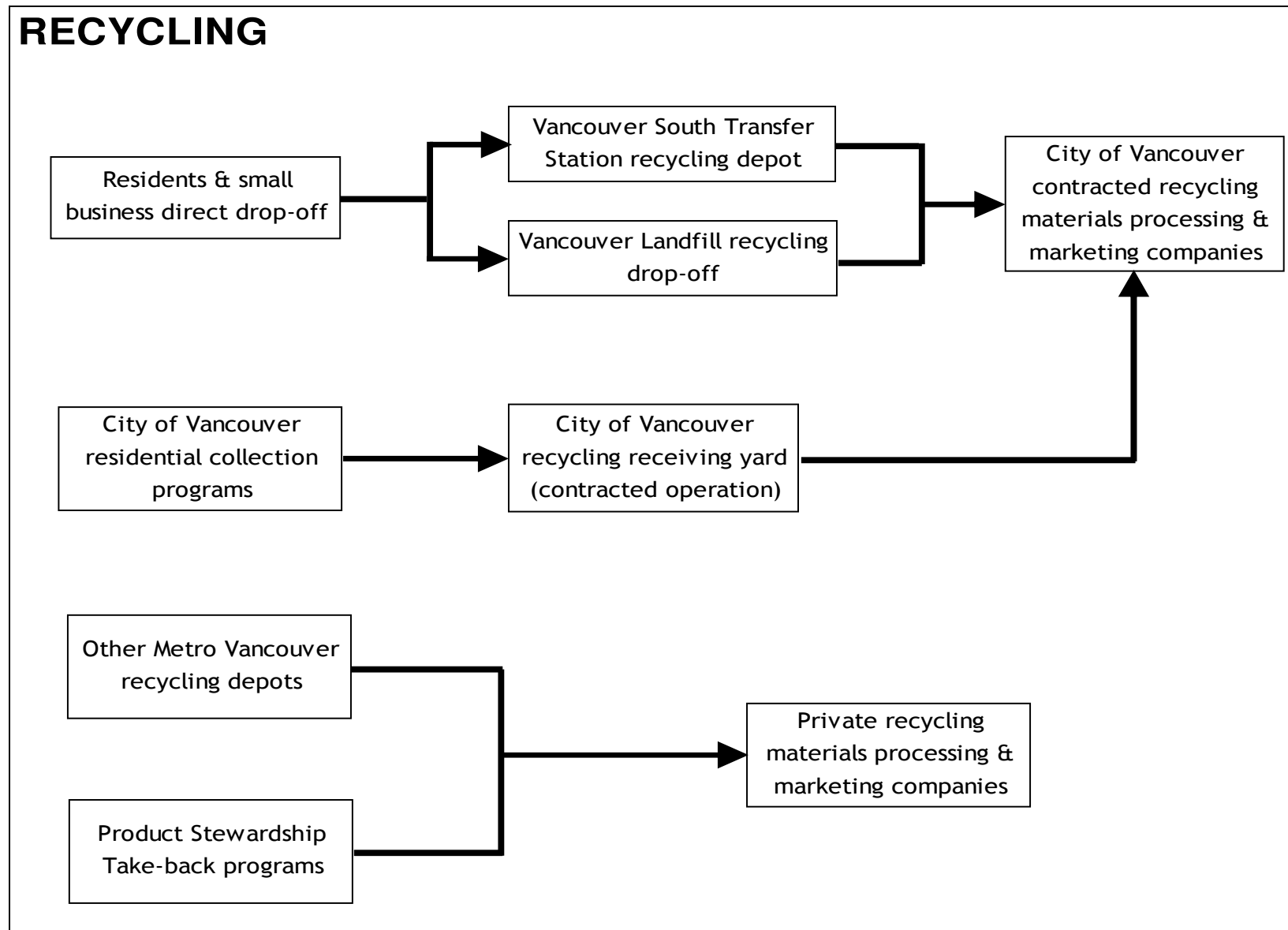




# YARD TRIMMINGS/FOOD SCRAPS



# RECYCLING



## FINANCIAL SUMMARY

Costs and revenues for Vancouver’s solid waste collection, transfer and disposal programs and facilities reside within the Solid Waste Utility (SWU). Separate SWU fees are set annually by Council for each of the three collection programs: Garbage, Recycling and Yard Trimmings/Food Scraps.

Surplus revenue from commercial tipping fees charged at the VSTS and VLF are transferred at year-end to the Capital Financing Fund (Solid Waste Capital Reserve - SWCR). This reserve funds Vancouver Landfill closure and post closure costs, serves as a SWU rate stabilization account, and as a funding/financing source for Solid Waste Utility projects.

The SWU operates on a breakeven principle. Due to variability beyond the City’s direct control, such as changes to market pricing of recycling commodities and the amount of material requiring disposal at Vancouver’s facilities, an annual net surplus or deficit is experienced from one year to the next in the collections programs. Accordingly, the SWU carries an accumulated net surplus or deficit balance which resides in the SWCR and annual SWU fees are set to take into account the prior years’ accumulated net surplus or deficit position.

The Street Cleaning program is funded from the property tax supported budget.

Financial information on programs and operations specific to the Vancouver South Transfer Station and Vancouver Landfill are available in the Vancouver Landfill Annual Report (Appendix 1).

Table 10: Collection Programs Financial Summary

		2006	2007	2008	2009	2010
<b><i>Solid Waste Collection</i></b>						
Garbage collection	Revenue	\$9,269,495	\$9,386,105	\$9,338,715	\$11,746,246	\$12,488,494
	Expenditure	\$9,765,997	\$9,447,060	\$11,024,437	\$11,313,114	\$11,775,437
	Surplus/(Deficit)	(\$496,502)	(\$60,955)	(\$1,685,722)	\$433,132	\$713,057
Recycling collection	Revenue	\$4,918,867	\$5,608,759	\$5,635,428	\$4,810,010	\$8,327,430
	Expenditure	\$5,340,886	\$4,937,290	\$5,510,995	\$6,884,943	\$7,651,232
	Surplus/(Deficit)	(\$422,019)	\$671,469	\$124,433	(\$2,074,933)	\$676,198
Yard trimmings collection	Revenue	\$3,429,966	\$4,354,000	\$3,860,790	\$4,882,769	\$5,126,237
	Expenditure	\$3,490,727	\$4,134,565	\$4,552,761	\$4,444,007	\$4,639,992
	Surplus/(Deficit)	(\$60,761)	\$219,435	(\$691,971)	\$438,762	\$486,245
TOTAL	Revenue	\$16,158,614	\$19,348,864	\$18,834,933	\$21,439,025	\$25,942,161
	Expenditure	\$17,137,896	\$18,518,915	\$21,088,193	\$22,642,064	\$24,066,661
	Surplus/(Deficit)	(\$979,282)	\$829,949	(\$2,253,260)	(\$1,203,039)	\$1,875,500

## FINANCIAL DETAILS

A breakdown of revenues and expenditures for each service area for the years 2006 to 2010 is provided as follows:

### Garbage Collection

The residential garbage collection program is funded by annual SWU fees and sticker sales revenue for pick-up of extra bags of garbage.

Table 11: Garbage Collection Annual Revenues and Expenditures

	2006	2007	2008	2009	2010
<b>Revenues</b>					
Annual User Fees	\$9,233,427	\$9,360,600	\$9,317,047	\$11,727,349	\$12,474,734
Sticker Sales	\$36,068	\$25,505	\$21,668	\$18,897	\$13,760
<b>TOTAL</b>	<b>\$9,269,495</b>	<b>\$9,386,105</b>	<b>\$9,338,715</b>	<b>\$11,746,246</b>	<b>\$12,488,494</b>
<b>Expenditures</b>					
Collection & disposal	\$9,714,747	\$9,376,331	\$10,961,279	\$11,254,909	\$11,675,759
Keep Vancouver Spectacular	\$51,250	\$50,076	\$45,271	\$56,377	\$47,743
VLF free residential garbage disposal	-	\$20,653	\$17,887	\$1,828	\$51,935
<b>TOTAL</b>	<b>\$9,765,997</b>	<b>\$9,447,060</b>	<b>\$11,024,437</b>	<b>\$11,313,114</b>	<b>\$11,775,437</b>
Surplus / (Deficit)	<b>(\$496,502)</b>	<b>(\$60,955)</b>	<b>(\$1,685,722)</b>	\$433,132	\$713,057

### Recycling Collection

The residential recycling collection program is funded by annual SWU fees and revenue from the sale of recyclable commodities to materials processing companies.

Table 12: Recycling Collection Annual Revenues and Expenditures

	2006	2007	2008	2009	2010
<b>Revenues</b>					
Annual user fees	\$3,459,153	\$3,520,400	\$3,380,666	\$3,734,053	\$6,449,451
Sale of recyclables	\$1,459,714	\$2,088,359	\$2,254,762	\$1,075,957	\$1,877,979
<b>TOTAL</b>	<b>\$4,918,867</b>	<b>\$5,608,759</b>	<b>\$5,635,428</b>	<b>\$4,810,010</b>	<b>\$8,327,430</b>
<b>Expenditures</b>					
Blue Box & apartment recycling program (including promotions & school plays)	\$5,340,886	\$4,937,920	\$5,510,995	\$6,884,943	\$7,651,232
Surplus / (Deficit)	<b>(\$422,019)</b>	\$671,469	\$124,433	<b>(\$2,074,933)</b>	\$676,198

## Yard Trimmings

The residential yard trimmings/food scraps collection program is funded by annual SWU fees (the sale of compost produced at the Vancouver Landfill off-sets Vancouver Landfill compost facility operating costs - refer to Appendix 1).

Table 13: Yard Trimmings Annual Revenues and Expenditures

	2006	2007	2008	2009	2010
<b>Revenues</b>					
Annual user fees	\$3,429,966	\$4,354,000	\$3,860,790	\$4,882,769	\$5,126,237
<b>Expenditures</b>					
Collection & composting	\$3,189,169	\$3,753,324	\$4,144,374	\$3,988,892	\$4,231,057
Street leaf collection & composting	\$127,300	\$217,140	\$218,315	\$263,217	\$177,919
Compost & Water Conservation Demonstration garden & hotline	\$119,344	\$107,829	\$111,934	\$121,797	\$107,003
Backyard composter & worm bin distribution (subsidy)	\$43,560	\$50,713	\$69,921	\$58,977	\$108,256
Christmas tree drop-off/ chipping event	\$11,354	\$5,559	\$8,217	\$11,124	\$15,757
TOTAL	\$3,490,727	\$4,134,565	\$4,552,761	\$4,444,007	\$4,639,992
Surplus / (Deficit)	(\$60,761)	\$219,435	(\$691,971)	\$438,762	\$486,245

## APPENDIX 1: 2010 VANCOUVER LANDFILL ANNUAL REPORT

As required under the Vancouver Landfill's Operational Certificate, the Transfer & Landfill Operations Branch produces a separate annual Vancouver Landfill report, available online at: [www.vancouver.ca/engsvcs/solidwaste/landfill/report.htm](http://www.vancouver.ca/engsvcs/solidwaste/landfill/report.htm).



**Solid Waste Management Branch  
2010 Solid Waste Division Report**

December 2011