



Metro Vancouver Recycling and Solid Waste Management 2019 Report

Metro Vancouver is responsible for waste reduction, recycling planning, and the operation of a series of solid waste facilities in the region. Planning for less waste, improving reuse and recycling systems, and managing the remaining waste reflects the public’s expectations of high environmental stewardship and affordable and accessible waste management. This document provides a summary of recycling and solid waste management activities that took place in the calendar year 2019. These activities are guided by Metro Vancouver’s *Integrated Solid Waste and Resource Management Plan (ISWRMP)*.

2019 PROGRAM HIGHLIGHTS

For more details on Metro Vancouver Solid Waste programs and campaigns, visit www.metrovancouver.org and type “solid waste” in the search bar.

POLICY & PLANNING

Metro Vancouver’s *Integrated Solid Waste and Resource Management Plan (ISWRMP)* was approved by the province in July 2011.

- Outlined initiatives to achieve diversion (recycling) rates of 70% by 2015 and 80% by 2020.
- Set the framework for solid waste management in Metro Vancouver.

Initiated the process of updating the solid waste management plan.

Metro Vancouver transfer stations started accepting waste from health care facility after a successful pilot and the development of safe operating procedures.

In July 2019, a carpet recycling pilot started at the Coquitlam Transfer Station. Used carpet is accepted as paid recycling and sent for recycling.

Introduced the paperless disposal ban surcharge program to replace the original program, which used hand-written surcharge notices. This new process is much faster and provides the surcharge notices and photos through email.

EVENTS & CONFERENCES

The 2019 Zero Waste Conference welcomed over 500 participants with a focus on business transformation, food waste and packaging, circular cities, plastics and Canada’s journey to a circular economy. The event improved upon previous years by increasing opportunities for networking and connection. A notable highlight was a front-page story of the Vancouver Sun on the issues of waste prevention and the circular economy.

Metro Vancouver staff attended and presented at a number of conferences including those hosted by:

- The Recycling Council of BC
- The Recycling Council of Alberta
- The Solid Waste Association of North America (SWANA)
- BioCycle West Coast
- Waste Management Association of BC

The National Zero Waste Council grew its membership in 2019 while expanding its reach through public engagement and new reports. Key initiatives included The Love Food Hate Waste Canada campaign, a report on circular cities and a report on priority plastic wastes, and a cutting-edge construction and demolition pilot project on developing a certification process for using recycled asphalt paving.

PROGRAMS & RESEARCH

Expanded the communication tools to include a text messaging service that informs clients of unexpected temporary facility closures.

In calendar 2019 activities for waste reduction and recycling programs and research included:

- Mapping compost markets for BC.
- Assessment of online marketplace for construction and demolition materials.
- Commercial/institutional waste composition study

Published a Single-Use Item Reduction Toolkit to support member municipalities pursuing programs and policies to reduce single-use items

Initiated procurement for a business case for an alternative fuel and recyclables recovery centre. The project would involve segregating small vehicle loads delivered to regional transfer stations and processing that material to recover recyclables and alternative fuel at the Coquitlam Landfill.

Initiated procurement for beneficial use of the bottom ash generated from the Waste-to-Energy Facility. The beneficial use of bottom ash could result in a reduction of up to 42,000 tonnes per year of material requiring disposal.

In 2019, Metro Vancouver Recycles, an online searchable database which allows residents and businesses to search for the nearest recycling locations for specific materials, was integrated with the Recycling Council of BC's 'Recyclopedia' system.

CAMPAIGNS & COMMUNICATION

Fifth year of Food scraps recycling education and awareness campaign: "Food Isn't Garbage".

Fourth year of 'More than Meets the Eye' promotion during Waste Reduction Week, providing options for E-waste.

Ninth year of Create Memories Not Garbage campaign which included a "Merry Memory Maker" app allowing residents to search for zero waste gift ideas based on price. A new holiday jingle was also added to the campaign.

Third year of 'Waste in its Place', providing options for legal dumping, with a focus on digital advertising and other targeted opportunities to raise awareness of legal disposal methods and programs.

Fourth year of the Love Food Hate Waste Canada household food waste prevention campaign, and the first full year as a partner in the national campaign managed by the National Zero Waste Council.

First year of Metro Vancouver's regional clothing waste reduction campaign: Think Thrice About Your Clothes. The campaign focusses on raising awareness of the clothing waste issue, and provides tips and information to help residents make informed decisions to reduce, repair, and re-use their clothing to minimize waste.

EXTENDED PRODUCER RESPONSIBILITY PROGRAMS

Extended Producer Responsibility (EPR) programs, also sometimes called product stewardship programs, are industry-managed and designed to make producers and consumers responsible for the management of regulated products and packaging throughout their life cycles.

- EPR holds producers and consumers accountable for the collection, recycling or safe disposal, as well as costs of regulated products at end-of-life.
- Most items managed through EPR programs are banned from Metro Vancouver disposal facilities.

The BC Ministry of the Environment and Climate Change Strategy issued the Plastics Action Plan: Policy Consultation Paper to seek feedback on new policy opportunities and amendments to the Recycling Regulation.

- Bans on single-use packaging were considered to avoid creating waste in the first place.
- Expanding existing EPR programs to include single-use items and packaging-like products to facilitate collection and recycling.
- Improving plastic beverage container returns by expanding the deposit-refund system to cover milk and milk-substitute containers and standardizing the refundable deposit to 10 cents.
- Reducing plastics overall through the development of recycled content standards, which complement EPR programs in collecting and recycling materials and turning recovered plastic into commodities.

No new EPR programs were announced in 2019, while the Ministry of Environment and Climate Change Strategy focused on continuous improvement.

- In June 2019, the Ministry of Environment and Climate Change Strategy approved Recycle BC's new five-year Packaging and Paper Product Extended Producer Responsibility Plan.

The BC Ministry of the Environment and Climate Change Strategy undertook a research project to determine the "Product and Services Gaps of EPR in BC" (February 2019).

- The project involved extensive research and interviews with key stakeholders, including municipalities and industry associations, to clearly understand the gaps between regulated product types in BC and unregulated product types that are similar in nature, listed as a national priority by the Canadian Council of Ministers of the Environment (CCME), or regulated in other jurisdictions.
- The study also reported on best practices for collecting a range of obligated products in EPR programs in other jurisdictions.

2019 RECYCLING AND SOLID WASTE SUMMARY

Metro Vancouver collects municipal solid waste, recycling, and disposal data in four categories: single-family residential, multi-family residential, commercial/institutional, and construction and demolition.

In 2019, 2,191,421 tonnes of material were recycled and diverted from disposal in Metro Vancouver. This amounts to 63% of the waste generated in the region. Approximately 5% of the recycled material flowed through Metro Vancouver and the City of Vancouver’s solid waste facilities. The remaining 1,299,005 tonnes of solid waste were sent for disposal at the Vancouver Landfill, the Metro Vancouver Waste-to-Energy Facility, and two remote landfills under contract to Metro Vancouver.

The locations where the waste is disposed is illustrated in Table 1 below. Metro Vancouver continues to be among the most successful communities in North America with respect to waste reduction and recycling. An update to the region’s solid waste management plan has been initiated with the goals of accelerating waste reduction and recycling, reducing greenhouse gases and promoting a circular economy maximizing local benefit.



Table 1: Metro Vancouver Disposed Waste Summary in 2019

WASTE DISPOSAL LOCATION	DISPOSED (tonnes)
Metro Vancouver Solid Waste System - Residential & Commercial/Institutional Waste	920,970
Metro Vancouver Solid Waste System - Used Gypsum	1,192
Vancouver Landfill - Construction & Demolition Waste	61,178
Licensed Facilities - Construction & Demolition Waste	286,636
Out of Region Landfills - Construction & Demolition Waste	29,028
TOTAL	1,299,005

The following table presents recycling and solid waste disposal quantities for each sector. In 2019, Metro Vancouver allocated the distribution of EPR recycling tonnages to the single-family, multi-family, and commercial/institutional sectors (see note 3 in Table 2). Appendix 1 includes a similar table with a comparison to the previous year.

Table 2: Metro Vancouver Recycling and Solid Waste Quantities in 2019

WASTE SECTOR	DISPOSED (tonnes)	RECYCLED (tonnes)	RECYCLING RATE ⁽³⁾ (%)	DISPOSED (tonnes/capita)	DISPOSED (tonnes/household)
Residential	488,218	571,961	54%	0.18	0.48
Single Family ⁽¹⁾					
Population ⁽⁴⁾ = 1,571,441	254,516	439,730	63%	0.16	0.53
Multi-Family ⁽²⁾					
Population ⁽⁴⁾ = 1,110,438	233,702	132,231	36%	0.21	0.43
Commercial/Institutional ⁽²⁾					
Employees ⁽⁴⁾ = 1,372,500	385,073	289,764	43%	0.14	0.38
Construction & Demolition ⁽⁵⁾	425,713	1,329,696	76%	0.16	0.42
TOTAL	1,299,005	2,191,421	63%	0.48	1.27

- (1) Reported tonnes of disposed and recycled waste are obtained from municipal reports, private recycling and processing facility records, landfill records, or product stewardship association records. This includes residential drop-off tonnages.
- (2) Estimated tonnes of disposed waste are based on per capita multi-family disposal rates and the total transfer station weigh scale reports for commercial waste, which includes multi-family and commercial/institutional tonnages. A calculated portion of that total is then attributed to each sector. Multi-family recycling is reported by municipalities and combined with estimated residential drop-off tonnages.
- (3) The total recycling rate includes the EPR tonnages. The recycling rates for individual sectors also include EPR tonnages, based on estimates of the relative contributions to EPR tonnages from single-family homes (54%), multi-family homes (36%), and businesses (10%) with the exception of Recycle BC tonnages that are allocated 60% to the single-family sector and 40% to the multi-family sector.
- (4) Population, employment and housing figures are based on 2019 projections provided by Metro Vancouver's Regional Planning Department and are based on 2016 census data.
- (5) Reported tonnes of recyclable materials and disposed waste are obtained from private licensed brokers, composters and transfer stations, and from unlicensed recycling facilities. As Metro Vancouver becomes aware of new facilities and other facilities close, the total number of facilities and the resultant tonnages may change.

Metro Vancouver’s Recycling and Solid Waste Management System

Metro Vancouver’s integrated recycling and solid waste management system provides service to the residents and businesses of 21 municipalities, one Electoral Area and one Treaty First Nation.

Metro Vancouver operates five transfer stations where residents and businesses drop off garbage, yard trimmings and a variety of other recyclable materials. In addition to the Metro Vancouver facilities, some municipalities operate their own recycling depots. Waste remaining after recycling is managed at the Metro Vancouver Waste to-Energy Facility and the Vancouver Landfill. The Vancouver Landfill and Vancouver Transfer Station are owned and operated by the City of Vancouver. Garbage in excess of what can be managed at local facilities is shipped to remote landfills for disposal. Metro Vancouver also created the National Zero Waste Council and runs a number of behavior change campaigns such as Love Food Hate Waste, Food Scraps Recycling, Create Memories not Garbage, and Think Thrice About Your Clothes.

Below is an overview of Metro Vancouver’s solid waste system. A more detailed description of each of Metro Vancouver’s five transfer stations can be found in Appendix 2.

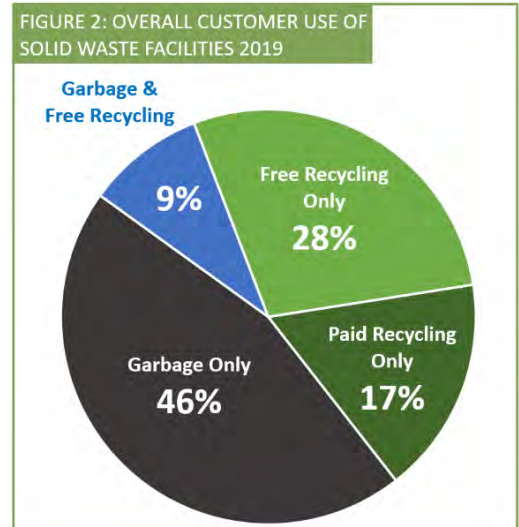


Annual customers: 1,018,425
Regional Garbage: 920,970 tonnes*
Paid Recycling: 57,157 tonnes
Free Recycling: 10,632 tonnes
 (includes 120 tonnes of textiles and 36 tonnes of books collected through charities for reuse)

* Regional garbage received at Metro Vancouver and City of Vancouver facilities (from residential and commercial/institutional sources) totaled 920,970 tonnes in 2019. In addition, the Waste-to-Energy Facility received 16,869 tonnes of utility residuals and international waste and the Vancouver Landfill received 61,178 tonnes of construction & demolition waste and 37,609 tonnes of utility residuals and 16,755 tonnes of bottom ash.

Table 3: Metro Vancouver Facilities in 2019

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	557,387	646,130
Clean Wood, Food Scraps & Other Paid Recycling	156,767	53,281
Gypsum	15,638	2,118
Mattresses	62,971 units	1,758
Free Recycling	382,542	10,632



Reuse

In 2017, Metro Vancouver added the reuse metric, which quantifies the amount of material reused rather than recycled or disposed. Reuse is defined as materials reused mostly in its original form without processing that significantly changes its structure. In contrast, recycling involves processes that alter the structure of materials and allows it to be remanufactured into new products. Examples of reused materials include clothing which has been donated and/or resold, certain minimally-processed EPR materials, donated foods, reused furniture and office equipment, salvaged building materials, and other items bought and sold which prevented the need to purchase new items. The data used to estimate reuse include registered charities' financial statements, EPR annual reports, statistical information, published information from reuse program web pages, and communication with key organizations in the second-hand clothing industry, hospitality sector, food rescue organizations, online marketplace, etc.

Reuse activity is reported separately from the recycling rate calculation because the reuse estimate is still new and has a substantial degree of uncertainty. Also, historical estimates of recycling rate did not include reuse, so including it now would preclude comparisons with prior years.

It is estimated that about 87,500 tonnes of material was reused in the Metro Vancouver region in 2019. The methodology used to make this estimate will be refined in future years.

Table 4: Estimate of Reuse in Metro Vancouver in 2019

MATERIAL CATEGORY	ANNUAL REUSE (tonnes) ROUNDED VALUE (to nearest 100 tonnes)
Textiles and Accessories - Sold	22,000
Textiles and Accessories - Industrial Wipes	6,700
EPR Programs	20,400
Food	3,500
Hotels and Hospitality Sector	900
Office Furniture	1,300
IT Equipment	1,400
Construction/ Demolition Materials	5,100
On-Line for Selected Materials	26,200
TOTAL	87,500

Recycling

Municipalities historically provided recycling services for the single-family residential sector, and some parts of the multi-family residential, and commercial/institutional sectors. Recycle BC, an extended producer responsibility agency is now responsible for curbside recycling of packaging and paper from single-family and multi-family homes. Additionally, municipal and private recycling depots and return to retail locations offer collection of many recyclable materials not accepted in Recycle BC's curbside recycling program such as film plastics, batteries, and beverage containers. Private facilities primarily manage recyclables from the commercial/institutional, and construction and demolition sectors.

Two of the largest construction and demolition recycling facilities in the region closed at the end of 2018. As a result, the region's capacity for wood recycling reduced significantly. Metro Vancouver responded by relaxing the clean wood disposal ban between December 24, 2018 to September 24, 2019, due to limited recycling options for wood. The two facilities reopened under new operators in late 2019 and early 2020.

The following table presents the quantities and types of recyclables collected in 2019.

Table 5: Quantities of Materials Recycled in Metro Vancouver in 2019

MATERIAL TYPE	TOTAL ⁽¹⁾ (tonnes)
Asphalt	239,711
Batteries	12,423
Concrete	825,896
Electronic & Electrical Equipment	11,600
Fibre	255,263
Glass	55,718
Gypsum	62,904
HHW	22,213
Metal	55,708
Other	15,006
Plastic	38,275
Textiles	487
Tires	22,241
Wood	161,420
Yard & Food	412,556
TOTAL	2,191,421

(1) Starting in 2019, the Major Appliance Recycling Roundtable started reporting the tonnages of material recovered through their stewardship program report instead of the estimated number of units. This new methodology is much more accurate than the previous methodology.

Materials Recycled through EPR Programs

Extended Producer Responsibility (EPR) programs, also sometimes called product stewardship programs, are industry-managed programs designed shift the costs and responsibilities for managing regulated products and packaging, throughout their lifecycles, from local governments to producers and consumers. EPR holds producers and consumers accountable for the costs and management of regulated products at its end-of-life. Most items managed through EPR programs are banned from Metro Vancouver disposal facilities and are recycled before they enter the region’s solid waste management system.

In 2019, twenty stewardship agencies reported recycling tonnages for Metro Vancouver for a total of 233,885 tonnes. This total is added to Metro Vancouver’s recycling tonnage. See **Table 6** for a breakdown of materials collected by each stewardship agency.

Table 6: Quantities of Materials Recycled through EPR Programs in 2019

EPR PROGRAM	TOTAL (tonnes)	MATERIAL TYPES
BC Used Oil Management Association (BCUOMA)	21,869	Oil, Antifreeze, Filters, Containers
Call2Recycle	317	Consumer Batteries <5 kg
Recycle My Cell	2	Cell Phones
Canadian Battery Association (CBA)	12,106	Lead Batteries
Canadian Beverage Association	386	Beverage Refrigeration Units
Major Appliance Recycling Roundtable (MARR)	7,389	Major Appliances
Recycle BC	93,521	Packaging and Paper Products
BC Brewers Recycled Container Collection Council (BRCCC)	12,251	Alcohol Containers and Packaging
Encorp Pacific (Canada)	45,367	Beverage Containers
Canadian Electrical Stewardship Association (CESA)	2,538	Portable Electrical Appliances
Electronic Products Recycling Association (EPRA)	7,946	Electronics
Health Products Stewardship Association (HPSA)	47	Medication
AlarmRecycle - Product Care	11	Smoke and Carbon Monoxide Alarms
BC Paint & HHW - Product Care	2,857	Paint, Household Hazardous Waste
BC Lights Program - Product Care	347	Lighting and Light Fixtures
Thermostat Recovery Program	0.1	Thermostats
Shaw Communications Inc.	380	Electronics
TELUS Communications Inc.	370	Electronics
Tire Stewardship BC	17,237	Tires
News Media Canada	8,942	Newsprint
TOTAL	233,885	

Disposed Waste

Residential and commercial/institutional waste disposal is handled through the regional solid waste management system. In 2019, the Regional Facilities consisted of:

- six transfer stations
- Vancouver Landfill
- Waste-to-Energy Facility in Burnaby
- Contracted contingency disposal at remote landfills (as of mid-2017)

The use of the Cache Creek Landfill by Metro Vancouver ceased in 2016. In mid-2017, Metro Vancouver began using alternative remote disposal facilities for waste in excess of what can be handled by in-region disposal facilities. All municipal solid waste delivered to the regional disposal facilities (landfills and waste-to-energy facility), as well as waste disposed out-of-region from Regional Facilities, is accounted in Metro Vancouver's disposal calculations. Construction and demolition waste is primarily handled separately from the regional solid waste management system and is disposed at either licensed private landfills or the Vancouver Landfill. In 2019, the residential, commercial/institutional, and construction and demolition sectors in Metro Vancouver disposed of a total 1,299,005 tonnes of waste to the regional system and private disposal facilities. The current per capita disposal rate in the region is 0.48 tonnes per person.

In 2019, Metro Vancouver residents, businesses, and institutions achieved an overall recycling rate of 63%. **Figures 3 and 4**, below, show changes in the regional recycling rate from all waste sectors, and the total per capita generation, disposal and recycling rates for the region since 1994, respectively. **Table 7** shows Metro Vancouver's regional waste and recycling figures. **Table 8** highlights the single-family residential recycling and solid waste figures.

FIGURE 3: REGIONAL RECYCLING RATE FOR WASTE FROM ALL SECTORS

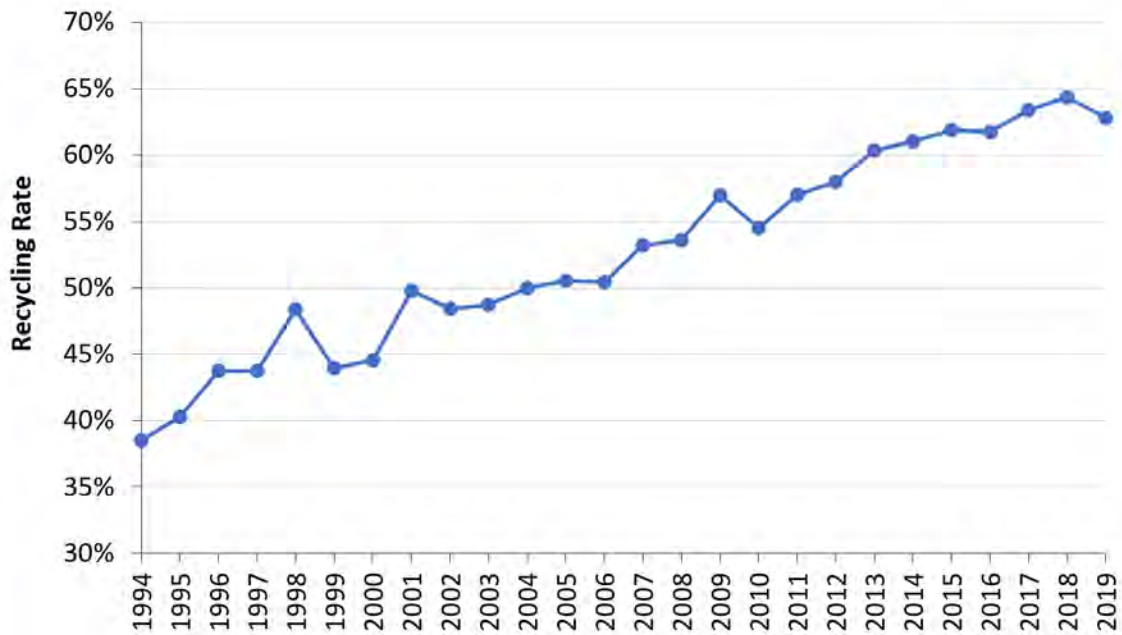


FIGURE 4: TOTAL WASTE GENERATION, DISPOSAL AND RECYCLING RATES PER CAPITA

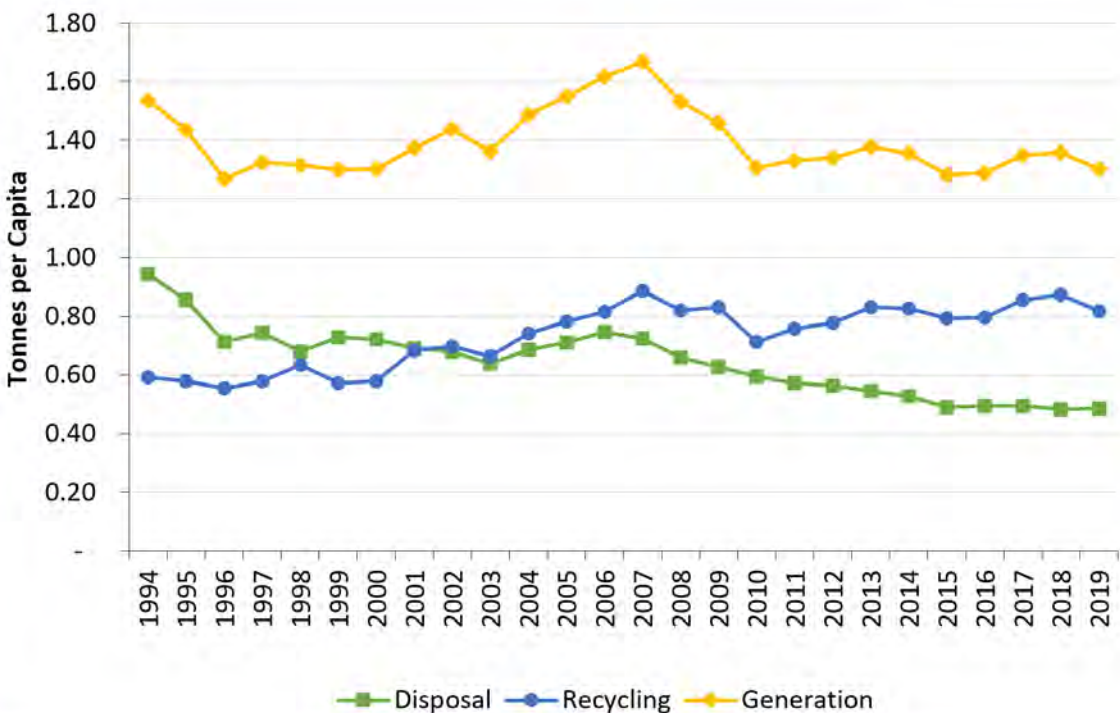


Table 7: Metro Vancouver Regional Solid Waste and Recycling Figures

YEAR	REGIONAL POPULATION	REGIONAL HOUSEHOLDS	TOTAL GENERATED (tonnes)	TOTAL RECYCLED (tonnes)	TOTAL DISPOSED (tonnes)	RECYCLING RATE (%)	GENERATION RATE (tonnes/capita)	DISPOSAL RATE (tonnes/capita)	DISPOSAL RATE (tonnes/household)
1994	1,732,567		2,663,581	1,025,921	1,680,750	39%	1.54	0.97	
1995	1,784,656		2,561,858	1,032,095	1,529,763	40%	1.44	0.86	
1996	1,906,492		2,419,323	1,058,441	1,360,882	44%	1.27	0.71	
1997	1,954,523		2,589,044	1,131,958	1,457,086	44%	1.32	0.75	
1998	1,984,743		2,609,913	1,261,680	1,348,233	48%	1.31	0.68	
1999	2,013,201		2,618,538	1,151,130	1,467,408	44%	1.30	0.73	
2000	2,041,399		2,657,076	1,183,611	1,473,465	45%	1.30	0.72	
2001	2,073,662		2,851,208	1,418,489	1,432,719	50%	1.37	0.69	
2002	2,102,244		2,903,894	1,470,445	1,433,449	51%	1.38	0.68	
2003	2,128,965		2,775,455	1,414,390	1,361,065	51%	1.30	0.64	
2004	2,153,998		3,072,702	1,595,999	1,476,703	52%	1.43	0.69	
2005	2,188,573		3,245,796	1,701,414	1,544,382	52%	1.48	0.71	
2006	2,218,026	817,040	3,434,617	1,794,613	1,640,004	52%	1.55	0.74	2.01
2007	2,251,887	831,909	3,598,142	1,980,751	1,617,391	55%	1.60	0.72	1.94
2008	2,273,095	836,304	3,366,123	1,866,892	1,499,231	55%	1.48	0.66	1.79
2009	2,314,163	865,017	3,374,840	1,922,840	1,452,001	57%	1.46	0.63	1.68
2010	2,351,496	879,874	3,075,392	1,676,117	1,399,275	55%	1.31	0.60	1.59
2011	2,395,520	898,273	3,188,348	1,817,446	1,370,902	57%	1.33	0.57	1.53
2012	2,408,559	909,994	3,228,305	1,871,339	1,356,966	58%	1.34	0.56	1.49
2013	2,430,305	920,375	3,348,498	2,020,114	1,328,384	60%	1.38	0.55	1.44
2014	2,465,031	939,212	3,343,471	2,040,280	1,303,191	61%	1.36	0.53	1.39
2015	2,497,052	943,072	3,202,979	1,982,137	1,220,842	62%	1.28	0.49	1.29
2016	2,546,595	943,072	3,295,830	2,039,569	1,256,261	62%	1.29	0.49	1.33
2017 ⁽¹⁾	2,610,929	984,640	3,525,224	2,234,055	1,291,169	63%	1.35	0.49	1.31
2018	2,648,493	998,930	3,599,801	2,317,050	1,282,752	64%	1.36	0.48	1.28
2019	2,681,878	1,019,526	3,490,425	2,191,421	1,299,005	63%	1.30	0.48	1.27

(1) 2017 demographics data has been updated from the previously published 2017 annual report to reflect new information that has become available.

Table 8: Single-family Residential Solid Waste and Recycling Figures

YEAR	SINGLE FAMILY RESIDENTIAL POPULATION	SINGLE FAMILY RESIDENTIAL HOUSEHOLDS	SECTOR GENERATED (tonnes)	SECTOR RECYCLED (tonnes) ¹	SECTOR DISPOSED (tonnes)	SECTOR RECYCLING RATE (%)	SECTOR GENERATION RATE (tonnes/capita)	SECTOR DISPOSAL RATE (tonnes/capita)	SECTOR DISPOSAL RATE (tonnes/household)
2006	1,389,809	428,045	778,629	336,577	442,052	43%	0.56	0.32	1.03
2007	1,399,185	434,163	783,878	352,455	431,423	45%	0.56	0.31	0.99
2008	1,409,040	428,045	741,783	324,093	417,690	44%	0.53	0.30	0.98
2009	1,419,442	443,894	749,536	330,294	419,242	44%	0.53	0.30	0.94
2010	1,429,495	447,932	721,746	344,450	377,296	48%	0.50	0.26	0.84
2011	1,440,334	454,662	732,112	363,594	368,518	50%	0.51	0.26	0.81
2012	1,476,411	456,259	784,196	439,077	345,118	56%	0.53	0.23	0.76
2013	1,484,766	462,170	761,169	456,822	304,347	60%	0.51	0.20	0.66
2014	1,494,336	464,955	774,877	482,090	292,787	62%	0.52	0.20	0.63
2015	1,511,428	471,157	809,500	533,861	275,639	66%	0.54	0.18	0.59
2016	1,533,062	476,559	764,037	491,190	272,848	64%	0.50	0.18	0.57
2017 ⁽²⁾	1,535,480	472,530	748,410	477,832	270,578	64%	0.49	0.18	0.57
2018	1,557,308	476,600	704,462	447,639	256,824	64%	0.45	0.16	0.54
2019	1,571,441	481,304	694,246	439,730	254,516	63%	0.44	0.16	0.53

(1) Includes distributed EPR Recyclables from 2012 onward.

(2) 2017 demographics data has been updated from the previously published 2017 annual report to reflect new information that has become available.

Acknowledgements

Metro Vancouver acknowledges the contributions of its member municipalities, EPR Product Stewardship Associations, and the many private recycling and processing facilities for the data used to complete this report.

APPENDIX 1 – METRO VANCOUVER RECYCLING AND SOLID WASTE QUANTITIES 2018 AND 2019

WASTE SECTOR		DISPOSED (tonnes)		RECYCLED (tonnes)		RECYCLING RATE (%) ⁽³⁾		
		2018	2019	2018	2019	2018	2019	% change
Residential	tonnes	494,048	488,218	585,565	571,961	54%	54%	0%
	tonnes/capita	0.19	0.18	0.22	0.21			
	Single Family ⁽¹⁾ tonnes	256,824	254,516	447,639	439,730	64%	63%	0%
	Multi-Family ⁽²⁾ tonnes	237,224	233,702	137,926	132,231	37%	36%	-1%
Commercial/Institutional ⁽²⁾	tonnes	397,021	385,073	337,283	289,764	46%	43%	-3%
	tonnes/capita	0.15	0.14	0.13	0.11			
Construction & Demolition ⁽⁴⁾	tonnes	391,683	425,713	1,394,202	1,329,696	78%	76%	-2%
Total	tonnes	1,282,752	1,299,005	2,317,050	2,191,421	64%	63%	-1%
	tonnes/capita	0.48	0.48	0.87	0.82			
	tonnes/ household	1.28	1.27	2.32	2.15			

Year	Single Family		Multi Family		Total	
	Population	Households	Population	Households	Population	Households
2018	1,557,308	476,600	1,091,184	522,330	2,648,493	998,930
2019	1,571,441	481,304	1,110,438	538,222	2,681,878	1,019,526

- (1) Reported tonnes of disposed and recycled waste are obtained from municipal reports, private recycling and processing facility records, landfill records, or product stewardship association records. This includes residential drop-off tonnages.
- (2) Estimated tonnes of disposed waste are based on per capita multi-family disposal rates and the total transfer station weigh scale reports for commercial waste, which includes multi-family and commercial/institutional tonnages. A calculated portion of that total is then attributed to each sector. Multi-family recycling is reported by municipalities and combined with estimated residential drop-off tonnages.
- (3) The total recycling rate includes the EPR tonnages. The recycling rates for individual sectors also include EPR tonnages, based on estimates of the relative contributions to EPR tonnages from single-family homes (54%), multi-family homes (36%), and businesses (10%) with the exception of Recycle BC tonnages that are allocated 60% to the single-family sector and 40% to the multi-family sector.
- (4) Reported tonnes of recyclable materials and disposed waste are obtained from private licensed brokers, composters and transfer stations, and from unlicensed recycling facilities.

APPENDIX 2 – METRO VANCOUVER SOLID WASTE SYSTEM 2019

metrovanancouver | SOLID WASTE



Metro Vancouver Solid Waste System

System Description

Metro Vancouver is responsible for waste reduction, recycling planning, and the operation of a series of solid waste facilities in the region. Planning for less waste, improving reuse and recycling systems and managing the remaining waste reflects the public’s expectations of high environmental stewardship, as well as the desire to keep waste management affordable.

Metro Vancouver operates five transfer stations where residents and businesses drop off garbage, yard trimmings and a variety of other recyclable materials. In addition to the Metro Vancouver facilities, some municipalities operate their own recycling depots. Recycling information from those facilities is included as part of the regional solid waste recycling statistics, but not included as part of this summary of Metro Vancouver solid waste facility data. Garbage remaining after recycling is managed at the Metro Vancouver Waste-to-Energy Facility and the Vancouver Landfill. The Vancouver Landfill and Vancouver Transfer Station are owned and operated by the City of Vancouver. Garbage in excess of what can be managed at local facilities is shipped to remote landfills for disposal.

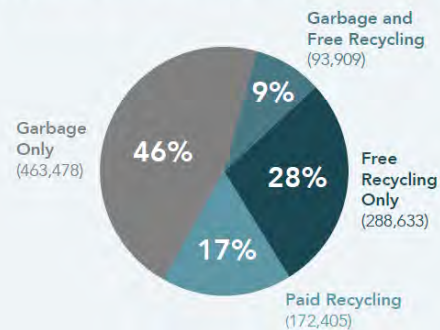
Metro Vancouver also created the National Zero Waste Council and runs a number of behavior change campaigns such as Love Food Hate Waste, Food Scraps Recycling, Create Memories not Garbage, and Think Thrice About Your Clothes.

Annual number of customers: 1,018,425
 Regional Garbage: 920,970 tonnes*
 Paid Recycling: 57,157 tonnes
 Free Recycling: 10,632 tonnes

Metro Vancouver Facilities

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	557,387	646,130
Clean Wood, Food Scraps & Other Paid Recycling	156,767	53,281
Gypsum	15,638	2,118
Mattresses	62,971 units	1,758
Free Recycling	382,542	10,632

2019 Overall Customer Use of Solid Waste Facilities



* Regional garbage received at Metro Vancouver and City of Vancouver facilities (from residential and commercial/institutional sources) totaled 920,970 tonnes in 2019. In addition, the Waste-to-Energy Facility received 16,869 tonnes of utility residuals and international waste and the Vancouver Landfill received 61,178 tonnes of construction & demolition waste and 37,609 tonnes of utility residuals and 16,755 tonnes of bottom ash.



30 Riverside Drive, North Vancouver

North Shore Transfer Station

Facility Description

The North Shore Transfer Station accepts garbage and a wide range of recyclables from both small and large vehicles. It has both attended and automated scales, the latter for use mainly by account customers with mechanically unloaded vehicles. Garbage is unloaded onto a tipping floor in the main building and a front end loader pushes the waste into an underground compactor for shipment to disposal. Yard trimmings, clean wood, gypsum and mattresses are accepted for recycling for a fee. A recycling depot where customers can drop off materials for free is located ahead of the scales. Accepted materials include batteries, electronics, cardboard, metal, expanded polystyrene, plastic containers and bags, light fixtures, cooking oil, books and textiles.

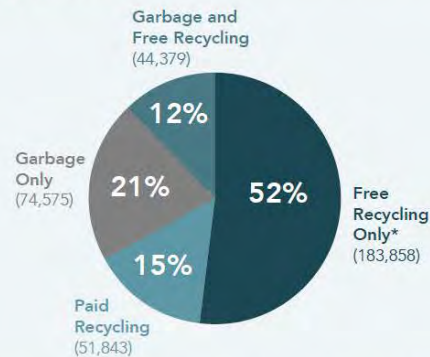
Site Area: 1.78 hectares (4.4 acres)
including green waste yard

Building Area: 51 m x 61 m = 3,100 m²

Number of customers in 2019: 354,655

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	118,954	115,152
Clean Wood, Food Scraps	46,763	34,085
Gypsum	5,080	717
Mattresses	15,895 units	546
Free Recycling	228,237	5,150

2019 Overall Customer Use of North Shore Transfer Station



* Estimated based on weigh scale data and the results of a customer survey conducted in 2019.



1200 United Boulevard, Coquitlam

Coquitlam

Transfer Station

Facility Description

The Coquitlam Transfer Station accepts garbage and a wide range of recyclables from both small and large vehicles. It has both attended and automated scales, the latter for use mainly by account customers with mechanically unloaded vehicles. Garbage is unloaded onto a tipping floor in the main building and a front end loader pushes the waste into an underground compactor for shipment to disposal. Yard trimmings, clean wood, gypsum and mattresses are accepted for recycling for a fee. A recycling depot where customers can drop off materials for free is located ahead of the scales. Accepted materials include batteries, electronics, cardboard, metal, expanded polystyrene, glass packaging, light fixtures, cooking oil, books and thermostats.

Site Area: 2.681 hectares (6.625 acres)

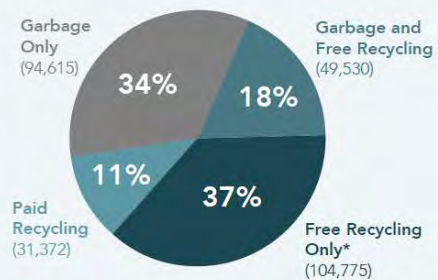
Building Area: 50 m x 78 m = 3,900 m²

Number of customers in 2019: 280,292

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	144,145	189,622
Clean Wood, Food Scraps	27,851	7,044
Gypsum	3,521	387
Mattresses	21,864 units	548
Free Recycling	154,305	5,482

A new transfer station is under construction one kilometre west of the current location and will open Spring 2021.

2019 Overall Customer Use of Coquitlam Transfer Station



* Estimated based on weigh scale data and the results of a customer survey conducted in 2019.



9770 192nd Street, Surrey

Surrey Transfer Station

Facility Description

The Surrey Transfer Station accepts garbage and a limited number of recyclables from both small and large vehicles. It has both attended and automated scales, the latter for use mainly by account customers with mechanically unloaded vehicles. Garbage is unloaded into a pit for mechanical unloading vehicles and onto the tipping floor for small vehicles. A front end loader pushes the waste into an underground compactor for shipment to disposal. Yard trimmings, clean wood, gypsum and mattresses are accepted for recycling for a fee. General recyclables such as metals are managed within the transfer station building. Customers have the option to pay for recyclables with their garbage, or weigh in and out for free drop off of their recyclables.

Site Area: 2 hectares (5 acres)

Building Area: 60 m x 88 m = 5,400 m²

Number of customers in 2019: 173,241

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	137,877	211,185
Clean Wood, Food Scraps & Other Paid Recycling	32,318	4,954
Gypsum	3,046	325
Mattresses	13,768 units	323

Metro Vancouver is constructing a new recycling and solid waste drop-off facility at 6711 – 154 Street in Surrey to increase the convenience of recycling and waste management for residents, reduce traffic and help to reduce illegal dumping. The new drop-off facility is expected to open in 2021.



1070 – 272nd Street, Aldergrove

Langley Transfer Station

Facility Description

The Langley Transfer Station accepts garbage and limited recyclables from customers in small vehicles. It has attended scales only, and is not used by mechanically unloading trucks. Garbage is hand-unloaded by customers onto a walking floor that is then loaded into a compactor container. Recyclables accepted for a fee include yard trimmings, clean wood, gypsum and mattresses. Other recyclables such as batteries, cardboard, metals, plastic bags and containers, refillable propane tanks and oil filters, are accepted within the transfer station area. Customers have the option to pay for recyclables with their garbage, or weigh in and out for free drop off of their recyclables.

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	49,572	7,498
Clean Wood, Food Scraps & Other Paid Recycling	22,093	3,519
Gypsum	1,968	344
Mattresses	4,539 units	124

Site Area: 3.86 hectares (9.5 acres)

Building Area: 1,672 m²

Number of customers in 2019: 73,633



10092 – 236th Street, Maple Ridge

Maple Ridge Transfer Station

Facility Description

The Maple Ridge Transfer Station accepts garbage and a number of recyclables from small vehicles that are hand-unloaded. It has attended scales only, and is not used by mechanically unloading trucks. Garbage is unloaded directly into trailers located below the tipping floor. Yard trimmings, clean wood, new and used gypsum and mattresses are accepted for recycling for a fee. A recycling depot, operated by Ridge Meadows Recycling Society, accepts recyclable materials for free and is adjacent to the transfer station.

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	81,035	9,373
Clean Wood, Food Scraps & Other Paid Recycling	27,742	3,680
Gypsum	2,023	344
Mattresses	6,905 units	216

Site Area: 2.43 hectares (6 acres), part of site leased to Ridge Meadows Recycling Society

Building Area: 45 m x 35 m = 1,575 m²

Number of customers in 2019: 110,800



5150 Riverbend Drive, Burnaby

Waste-to-Energy Facility

Facility Description

Metro Vancouver’s Waste-to-Energy Facility has operated in Burnaby since 1988 and handles about 250,000 tonnes of garbage per year – roughly a quarter of the region’s garbage. It is a mass-burn facility that turns waste into electricity (enough to power 16,000 homes) and recovers approximately 6,500 tonnes of ferrous and 500 tonnes of non-ferrous metal annually.

The waste-to-energy process is monitored 24 hours a day, seven days a week, 365 days a year from a control room located on site. Facility emissions data and compliance reports are available on Metro Vancouver’s website in real time. The range of emissions monitored, includes common air contaminants such as nitrogen oxides (NOx) and particulate matter (PM), as well as acid gases, trace metals, trace organics, and dioxins / furans.

The facility receives waste from an average of 80 mechanically unloading trucks per day that empty their loads into a large garbage bunker.

Site Area: 1.8 hectares (4.4 acres)

Building Area: 70 m x 70 m = 4,900 m²

Annual number of customers: 25,804

2019 tonnage: 253,184 tonnes

