



Metro Vancouver Recycling and Solid Waste Management 2020 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 summarizes the recycling and solid waste management activities that took place in the calendar year 2020. These activities are guided by Metro Vancouver’s *Integrated Solid Waste and Resource Management Plan (ISWRMP)*.

2020 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 including convening a Solid Waste Management Plan Independent Consultation and Engagement Panel and two foundational studies to inform the solid waste management plan update:

- Assessment of Regional Solid Waste System
- Circular Economy and 3Rs Study

Supported the development of the Metro Vancouver Climate 2050 Waste Discussion Paper which identifies issues, opportunities, actions by others and potential priorities to be considered in developing a Climate 2050 Waste Roadmap.

EVENTS & CONFERENCES

The 2020 Zero Waste Conference marked the 10th anniversary of the conference. The overarching theme for the conference was “A Future Without Waste”; the sub-theme was Resiliency, Prosperity, Carbon Neutrality - the Circular Economy Solution. Event went virtual due to the pandemic and attracted just under 500 registered online participants from across Canada and Globally.

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

- The Recycling Council of BC (RCBC)
- The Solid Waste Association of North America (SWANA)
- Coast Waste Management Association (CWMA)
- Waste Management Association of BC (WMABC)

The National Zero Waste Council published a report titled *Less Food Waste, Less Packaging Waste* in partnership with RECYC-QUÉBEC, Éco Entreprises Québec and PAC Packaging Consortium. Through the C&D working group, City of Richmond and Lafarge completed a pilot project with 40% recycled asphalt pavement. The Council is a founding member of the Circular Economy Leadership Coalition which started work in 2020 to launch the Canada Plastics Pact and Circular Cities and Region initiative.

PROGRAMS & RESEARCH

Metro Vancouver recycling and waste centres remained open during the pandemic with updated safety measures. Regional facilities continue to accept materials for recycling and reuse.

To address the limited availability of public washrooms during the first half of 2020, Metro Vancouver created a municipal washroom finder tool to help truck drivers providing essential collection services for garbage, organics and recycling throughout the region access washroom facilities.

Added an Encorp Return-It Express & GO at the North Shore Recycling and Waste Centre

Annual survey at regional recycling and waste centers showed high levels of customer satisfaction with respect to hours of operation (94%), level of service (88%), and range of materials (93%). Most customers also agreed fee levels (70%), and wait times (92%) were reasonable.

A waste composition study was conducted in the fall of 2020. The study found a surge in single-use Covid-19 related items such as mask, gloves and white.

Previously known as “transfer stations”, Metro Vancouver solid waste facilities were renamed to “recycling and waste centers” to better describe their purpose and the services available.

CAMPAIGNS & COMMUNICATION

Seventh year of food scraps recycling education and awareness campaign: “Food Isn’t Garbage”.

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

Tenth year of Create Memories Not Garbage campaign which included the “Merry Memory Maker” app allowing residents to search for low-waste gift ideas organized by price range.

Fourth year of ‘Waste in its Place’ campaign focused on digital advertising to raise awareness of legal disposal methods and programs. PPE disposal creative was added to the campaign in 2020.

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

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

Metro Vancouver launched a “Bag it. Bin it.” campaign to address littered personal protective equipment (PPE) such as face masks and rubber gloves, as well as cleaning supplies like sanitary wipes.

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 Recycling Regulation Policy Intentions Paper to consult upon priority products for future EPR programs as well as other issues like derelict fishing gear. Specifically, the following products were considered:

- Mattresses and foundations
- Moderately hazardous products, such as single-use propane canisters expanding existing EPR programs to include single-use items and packaging-like products to facilitate collection and recycling.
- Hybrid and electric vehicle batteries
- Packaging and paper product, beyond residential sources

No new EPR programs were announced in 2020, while the Ministry of Environment and Climate Change Strategy focused on continuous improvement.

2020 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 2020, Metro Vancouver’s solid waste system experienced a substantial shift in waste and recycling from the commercial/institutional sector to the residential sector. These impacts are likely associated with the temporary closure of some businesses and institutions, the shift to online work and learning, and more time spent at home during the COVID-19 pandemic. Despite these challenges, 2,261,038 tonnes of material were recycled and diverted

from disposal in Metro Vancouver. This amounts to 64% 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 1,245,314 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.

The following table presents recycling and solid waste disposal quantities for each sector. In 2020, 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.

FIGURE 1: METRO VANCOUVER RECYCLING & SOLID WASTE TOTALS 2020

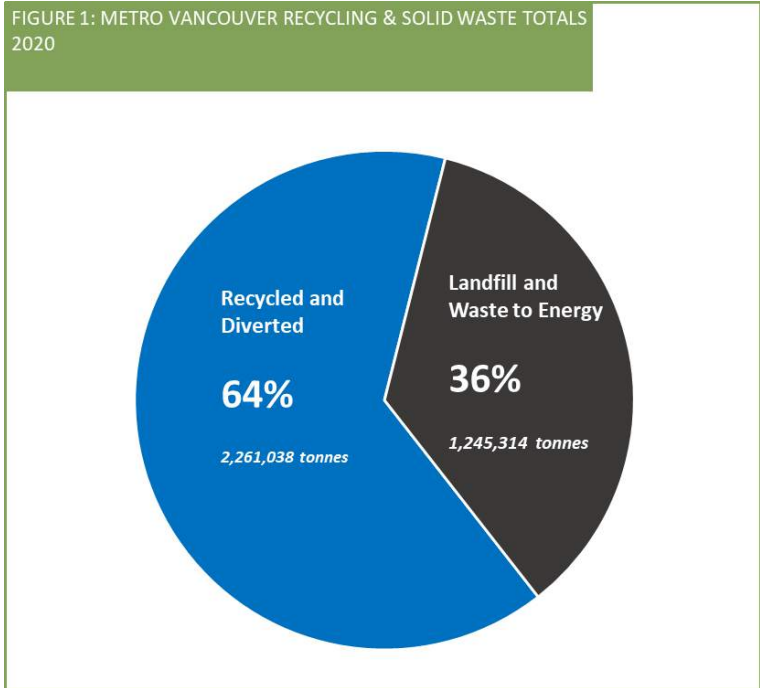


Table 1: Metro Vancouver Recycling and Solid Waste Quantities in 2020

WASTE SECTOR	DISPOSED (tonnes)	RECYCLED (tonnes)	RECYCLING RATE ⁽³⁾ (%)	DISPOSED (tonnes/capita)	DISPOSED (tonnes/household)
Residential	509,038	631,627	55%	0.18	0.47
Single Family ⁽¹⁾ Population ⁽⁴⁾ = 1,634,477	269,485	485,419	64%	0.16	0.53
Multi-Family ⁽²⁾ Population ⁽⁴⁾ = 1,132,476	239,554	146,208	38%	0.21	0.42
Commercial/Institutional ⁽²⁾ Employees ⁽⁴⁾ = 1,411,980	354,268	278,507	44%	0.13	0.33
Construction & Demolition ⁽⁵⁾	382,007	1,350,904	78%	0.14	0.36
TOTAL	1,245,314	2,261,038	64%	0.45	1.16

- (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 recycling and waste centre 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 2020 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 recycling and waste centres 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 recycling and waste centres can be found in Appendix 2.



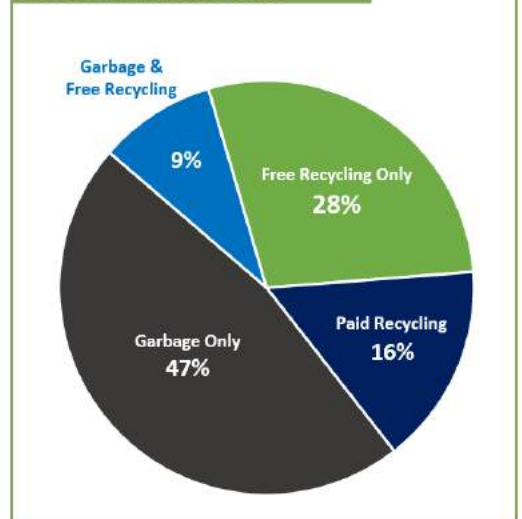
Annual customers: 1,065,863
Regional Garbage: 850,748 tonnes*
Paid Recycling: 57,702 tonnes
Free Recycling: 11,336 tonnes
 (includes 101 tonnes of textiles and 137 tonnes of books collected through charities)

* Regional garbage received at Metro Vancouver and City of Vancouver facilities (from residential and commercial/institutional sources) totaled 850,748 tonnes in 2020. In addition, the Waste-to-Energy Facility received 11,264 tonnes of utility residuals and international waste and the Vancouver Landfill received 44,138 tonnes of construction & demolition waste and 38,920 tonnes of utility residuals and 41,478 tonnes of bottom ash.

Table 2: Metro Vancouver Facilities in 2020

MATERIAL(S)	CUSTOMERS	TONNES
Garbage	597,214	639,205
Clean Wood, Organics & Other Paid Recycling	150,654	53,654
Gypsum	16,234	2,104
Mattresses	70,069 units	1,944
Free Recycling	399,360	11,336

FIGURE 2: OVERALL CUSTOMER USE OF SOLID WASTE FACILITIES 2020



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 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 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 the recycling rate did not include reuse, so including it now would preclude comparisons with prior years.

It is estimated that about 61,600 tonnes of material was reused in the Metro Vancouver region in 2020. Due to the COVID-19 pandemic, many charities stopped collecting clothing and household item donations starting in March 2020. This may have contributed to the significant drop in the textiles reuse category. Hotel occupancy also decreased by approximately 50%, leading to a decline in reuse in the hotel and hospitality sector. Conversely, the pandemic may have highlighted the issue of food insecurity and accelerated the growth of the food reuse sector. The methodology used to estimate reuse continues to be refined year after year.

Table 3: Estimate of Reuse in Metro Vancouver in 2020

MATERIAL CATEGORY	ANNUAL REUSE (tonnes) ROUNDED VALUE (to nearest 100 tonnes)
Textiles and Accessories - Sold	4,300
Textiles and Accessories - Industrial Wipes	500
EPR Programs	17,200
Food	4,800
Hotels and Hospitality Sector	400
Office Furniture	1,200
IT Equipment	1,400
Construction/ Demolition Materials	4,800
On-Line for Selected Materials	27,000
TOTAL	61,600

Recycling

Municipalities historically provided recycling services for the single-family residential sector, some parts of the multi-family residential, and some parts of the commercial/institutional sector. 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 the 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.

The COVID-19 pandemic affected society and recycling in many ways. The temporary closure of some businesses, restrictions on indoor dining and events, and shift to working from home resulted in a transfer of recyclables from the commercial/institutional sector to the residential sector. In particular, Metro Vancouver experienced an increase in materials associated with single-use items and packaging, such as paper/paper products, metal, and plastic. Recycle BC experienced a large influx of packaging and paper into their program as well.

Asphalt and concrete generated by construction and demolition activity are typically considered municipal solid waste, while material originated from road construction is excluded. However, it is challenging to determine the origin of the material from the data provided by the processors. Asphalt and concrete recyclers are currently unlicensed and Metro Vancouver relies on voluntary reporting.

The following table presents the quantities and types of recyclables collected in 2020.

Table 4: Quantities of Materials Recycled in Metro Vancouver in 2020

MATERIAL TYPE	TOTAL ⁽¹⁾ (tonnes)
Asphalt	295,300
Batteries	12,952
Concrete	802,701
Electronic & Electrical Equipment	11,650
Paper/Paper Products	313,830
Glass	57,267
Gypsum	56,782
Household Hazardous Waste	20,406
Metal	73,636
Other	7,001
Plastic	44,587
Textiles	639
Tires	22,068
Wood	152,487
Yard & Food	389,732
TOTAL	2,261,038

(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 2020, twenty stewardship agencies reported recycling tonnages for Metro Vancouver for a total of 237,699 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 5: Quantities of Materials Recycled through EPR Programs in 2020

EPR PROGRAM	TOTAL (tonnes)	MATERIAL TYPES
BC Used Oil Management Association (BCUOMA)	19,746	Oil, Antifreeze, Filters, Containers
Call2Recycle	380	Consumer Batteries <5 kg
Recycle My Cell	1	Cell Phones
Canadian Battery Association (CBA)	12,572	Lead Batteries
Canadian Beverage Association	425	Beverage Refrigeration Units
Major Appliance Recycling Roundtable (MARR)	10,457	Major Appliances
Recycle BC	104,723	Packaging and Paper Products
BC Brewers Recycled Container Collection Council (BRCCC)	9,952	Alcohol Containers and Packaging
Encorp Pacific (Canada)	41,937	Beverage Containers
Canadian Electrical Stewardship Association (CESA)	2,552	Portable Electrical Appliances
Electronic Products Recycling Association (EPRA)	7,215	Electronics
Health Products Stewardship Association (HPSA)	44	Medication
AlarmRecycle - Product Care	10	Smoke and Carbon Monoxide Alarms
BC Paint & HHW - Product Care	3,007	Paint, Household Hazardous Waste
BC Lights Program - Product Care	1,094	Lighting and Light Fixtures
Thermostat Recovery Program	0.0	Thermostats
Shaw Communications Inc.	172	Electronics
TELUS Communications Inc.	549	Electronics
Tire Stewardship BC	17,268	Tires
News Media Canada	5,595	Newsprint
TOTAL	237,699	

Disposed Waste

Residential and commercial/institutional waste disposal is handled through the regional solid waste management system. In 2020, the Regional Facilities consisted of:

- six recycling and waste centres
- 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 2020, the residential, commercial/institutional, and construction and demolition sectors in Metro Vancouver disposed of a total 1,245,314 tonnes of waste to the regional system and private disposal facilities. The current per capita disposal rate in the region is 0.45 tonnes per person.

In 2020, Metro Vancouver residents, businesses, and institutions achieved an overall recycling rate of 64%. **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

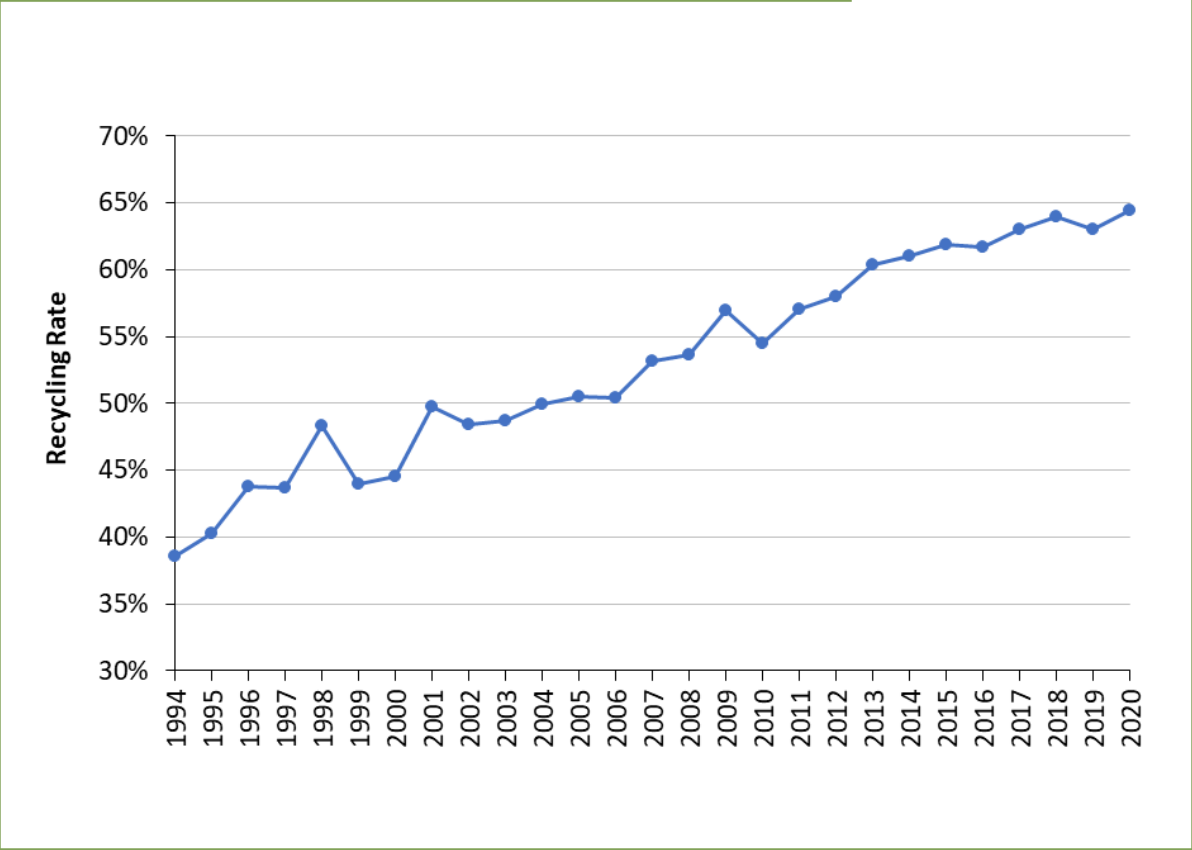


FIGURE 4: TOTAL WASTE GENERATION, DISPOSAL AND RECYCLING RATES PER CAPITA

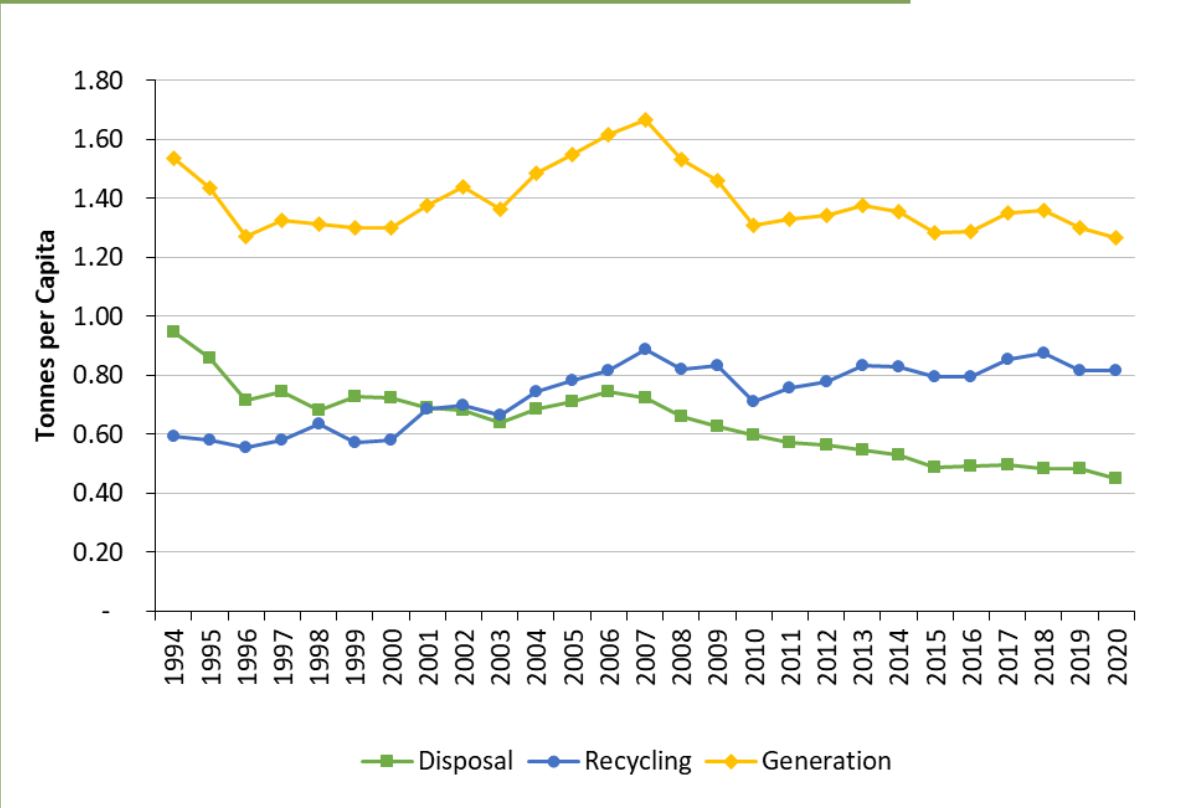


Table 6: Metro Vancouver Regional Solid Waste and Recycling Figures

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
2020	2,766,953	1,075,454	3,506,352	2,261,038	1,245,314	64%	1.27	0.45	1.16

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

Table 7: 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
2020	1,634,477	504,527	754,903	485,419	269,485	64%	0.46	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.