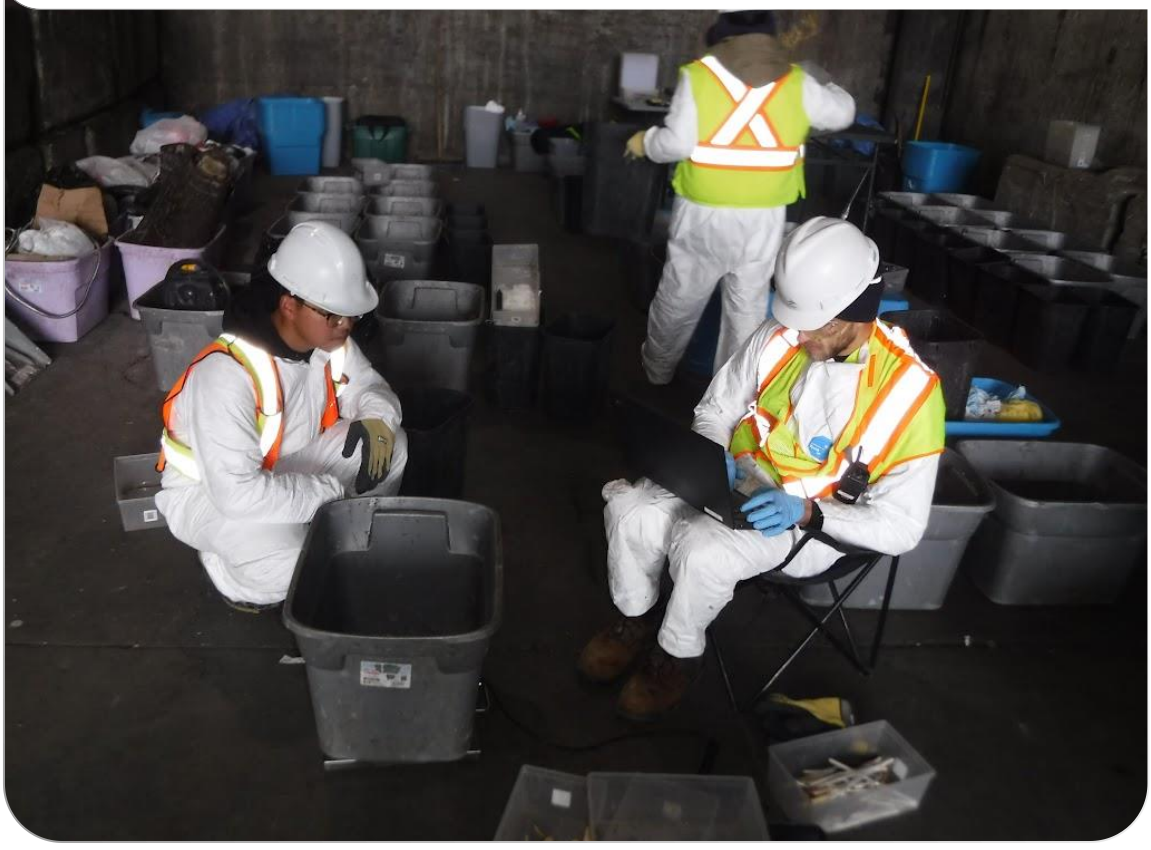
Prepared for:
Metro Vancouver
Prepared by:
Dillon Consulting Limited

METRO VANCOUVER

2024 Full-Scale Waste Composition Study



June 2025 – 23-6987

June 24, 2025

Metro Vancouver
4730 Kingsway
Burnaby, BC
V5H 0C6

Attention: Terry Fulton
Senior Project Engineer – Solid Waste Services, Metro Vancouver

Metro Vancouver Waste Composition Study – Full-Scale Facility Audit (2024)

Dear Terry,

Dillon Consulting Limited (Dillon) is pleased to submit this report to Metro Vancouver for the Metro Vancouver Waste Composition Study – Full-Scale Facility Audit (Project A, 2024) completed at the North Surrey Recycling and Waste Centre, United Boulevard Recycling and Waste Centre, and Vancouver South Transfer Station from November 18 to December 13, 2024. This report presents the waste composition study results, including Single-Use Item (SUI) counts, an analysis by sector, and a comparison of the 2024 waste composition data with Waste Composition Monitoring Program reports from previous years. The audit data containing composition for all categories is attached to this report as **Appendix D**.

Sincerely,

DILLON CONSULTING LIMITED

Heidi Gerlach, EP, Associate
Project Manager

KH: rh

Our file: 23-6987

DILLON CONSULTING

3820 Cessna Drive
Suite 510
Richmond
British Columbia
Canada
V7B 0A2
Telephone
604.278.7847
Fax
604.278.7894

Dillon Consulting Limited

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Executive Summary

Dillon Consulting Limited (Dillon) was retained by Metro Vancouver to conduct the 2024 Full-Scale Waste Composition Study. Sampling was completed at three facilities in the Metro Vancouver region over four weeks in November and December 2024.

Waste from the sectors listed below was collected, sampled, and sorted. Materials from public litter cans, municipal abandoned waste collection, and street sweeping were not included in this study.

- Single-Family (SF) residential waste;
- Multi-Family (MF) residential waste;
- Commercial/Institutional (CI) waste; and
- Small Load (SL) waste.

The number of samples analyzed from each sector takes into consideration the proportional amount of waste disposed by each sector in order to provide waste composition data that is representative of each sector. Samples were collected at the following facilities:

- North Surrey Recycling and Waste Centre;
- United Boulevard Recycling and Waste Centre; and
- Vancouver South Transfer Station.

Executive Summary Table 1 summarizes the waste composition by sector and the combined waste composition for all sectors.

Executive Summary Table 1: Waste Composition Summary

Primary Category	Combined Composition	By Sector			
		SF (n=17)	MF (n=19)	CI (n=37)	SL (n=25)
Disposed Tonnes	**942,526[1]**	**142,137**	**279,747**	**397,522**	**123,120**
Paper	17%	19%	18%	19%	5%
Plastic	19%	24%	21%	19%	12%
Plastic Labelled Compostable	<1%	0%	0%	0%	0%
Compostable Organics	22%	24%	28%	22%	6%
Non-Compostable Organics	15%	7%	6%	18%	39%
Metals	3%	3%	3%	3%	3%
Glass	4%	2%	4%	3%	6%
Building Material	4%	2%	2%	6%	9%
Electronic Waste	1%	2%	2%	1%	1%
Household Hazardous	2%	1%	1%	2%	5%

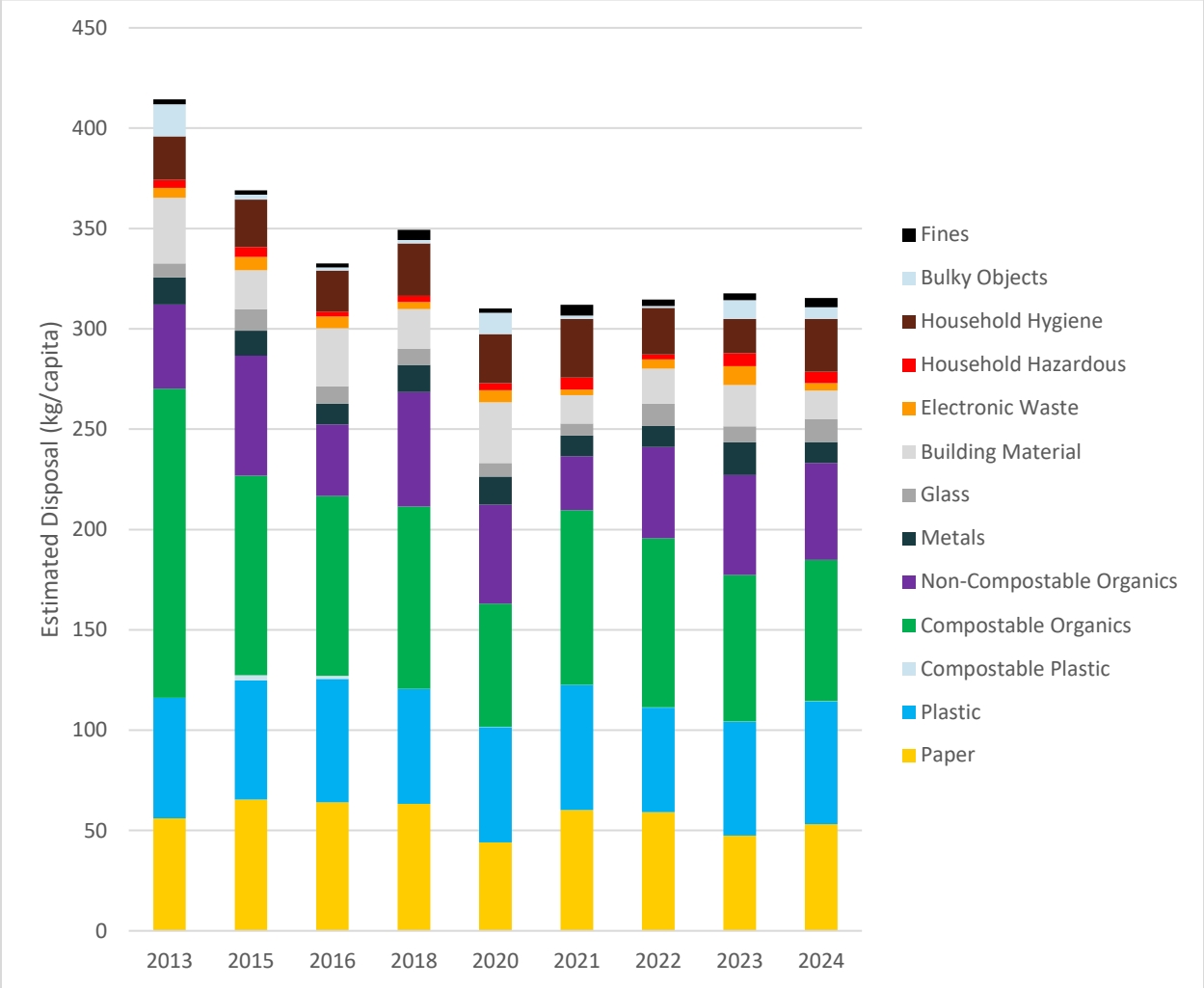
[1] This is the disposed tonnes of residential, commercial and institutional waste in 2023

Primary Category	Combined Composition	By Sector			
		SF (n=17)	MF (n=19)	CI (n=37)	SL (n=25)
Household Hygiene	8%	15%	14%	5%	0%
Bulky Objects	2%	0%	0%	1%	11%
Fines	1%	2%	1%	1%	1%

[1]All percentages presented were rounded to the nearest whole number. Percentages may not add up to 100%.

Executive Summary Figure 1 presents the overall waste composition (all sectors combined) for all full-scale, multi-sector waste composition studies completed since 2013. Studies between 2013 and 2024 had similar methodologies and consistent primary categories.

Executive Summary Figure 1: Waste Composition and Disposal for All Sectors Combined (2013 – 2024)



Overall, the estimated disposal per capita has been relatively stable since 2021. The top four components of waste remains the same: compostable organics, plastic, paper and non-compostable organics. Compostable organics have trended downwards since 2021.

1.0 Introduction

1.1 Background

Metro Vancouver provides essential services and planning for British Columbia's lower mainland region, including solid waste management for approximately 3 million people across 21 municipalities, one Electoral Area, and one Treaty First Nation. Solid waste management in the region is facilitated by a Waste-to-Energy Facility and six Recycling and Waste Centres, in conjunction with the Vancouver South Transfer Station and the Vancouver Landfill managed by the City of Vancouver. These facilities comprise the public-sector system, which provides recycling and disposal services to residents and businesses in the region.

In 2023, approximately 942,526 tonnes of garbage across four waste sectors were disposed at regional facilities. This study aims to better understand the waste composition of garbage entering facilities that comprise the public-sector solid waste management system in Metro Vancouver.

As Metro Vancouver is responsible for the long-term planning for waste generation and disposal by residents and businesses within the region, the Corporation is guided by a solid waste management plan, approved in 2011. Currently, Metro Vancouver is in the process of updating the region's solid waste management plan, which will explore options to improve waste reduction and recycling. This may include identifying types of waste to prioritize in future initiatives. Waste composition studies are conducted to collect data, complete analysis, and provide results to inform future programs and policies.

1.2 Scope of Work

Dillon Consulting Limited (Dillon) was retained to complete Metro Vancouver's Full-Scale Facility Waste Composition Study for 2024. Dillon completed waste sampling and sorting in accordance with the standard methodologies used in previous Metro Vancouver waste composition studies. Sampling was completed at three facilities in the Metro Vancouver region over four consecutive weeks, from November 18 to December 13, 2024.

Waste was collected, sampled, and sorted from the following sectors:

- Single-Family (SF) residential waste;
- Multi-Family (MF) residential waste;
- Commercial/Institutional (CI) waste; and
- Small Load (SL) waste.

Materials from public litter cans, street sweeping, and abandoned waste collection were not included in this study.

Samples were collected at the following facilities:

- North Surrey Recycling and Waste Centre;
- United Boulevard Recycling and Waste Centre; and
- Vancouver South Transfer Station.

The number of samples analyzed from each sector, the facilities that materials were sampled from, and the dates for sampling at each facility are presented in **Table 1**. The number of samples to be analyzed from each sector was based on the variability of waste material in each sector, in order to collect data representative of the sector. Therefore, fewer samples were analyzed from sectors that have low variability between samples (SF and MF), and more samples were analyzed from sectors that have high variability between samples (CI and SL).

Table 1: Number of Samples Completed by Sector and Facility

Sector	North Surrey Recycling and Waste Centre	United Boulevard Recycling and Waste Centre	Vancouver South Transfer Station	Grand Total
Sorting Dates	**November 18 – November 22, 2024**	**November 25 – December 6, 2024**	**December 9 – December 13, 2024**	
SF	3	10	4	17
MF	3	12	4	19
CI	8	18	11	37
SL	9	10	6	25
Grand Total	**23**	**50**	**25**	**98**

Overall, 98 samples with a total weight of 9,576 kg were sorted. The average sample weight was 98 kg. The target sample size was 100 kg for the SF, MF, and CI sectors and the average sample size for these sectors was 103 kg. The average sample size for the SL sector was 84 kg.

Garbage was sorted into 13 primary categories and a total of 174 subcategories. Category descriptions are presented in **Appendix A**.

2.0 Methodology

2.1 Sample Collection

The field supervisor worked with facility staff to randomly select samples from the identified sectors. The municipality of origin of inbound waste loads was noted by communicating with the receiving waste facility's scale house or the waste haulers of the load. Following initial identification of the sector, the field supervisor contacted waste facility personnel to confirm if the origin of the load and to obtain the scale ticket given the load had been selected for sampling. At each facility, facility staff would use a loader to retrieve a sample from the tipping floor and transport it to a sample collection and sorting area, designated by the facility's manager. For each load selected, haulers would unload a quarter of their total inbound load, or facility staff would retrieve either one loader bucket of the material, weighing approximately 300 to 500 kg, or its entirety if the selected load was insufficient to fill a loader bucket. Dillon field staff then collected a sample of the retrieved material weighing approximately 100 kg, whenever possible, as entire inbound loads could be less than 100 kg if comprised of low-density materials. For inbound loads with low-density materials, 640 L of waste was collected as a sample. Field staff collected the sample in a uniform manner across and around the retrieved material to obtain a representative sample. The collected sample was then weighed and labelled prior to sorting.

2.2 Data Analysis and Statistical Evaluation

The data was compiled electronically throughout the course of the project. Data collected during field work, including scale tickets, was compiled on-site and reviewed daily to ensure accuracy. Sample logs and checklists were employed to confirm that a sufficient distribution of samples was collected for statistical evaluation. Data was regularly subjected to quality assurance and quality control methods during fieldwork and analysis, confirming the differences between pre-sorting and post-sorting sample weights were within acceptable margins of accuracy (i.e., the majority of samples fell within a 3% difference). The overall composition for each sector was calculated by combining the weights of all sorted materials after outliers were removed. The data collected was scanned to identify any outliers. The composition for all sectors combined was calculated by weighting the sector compositions using the overall Metro Vancouver disposal for each sector.

2.3 Single-Use Items

In this study, SUI reference weights were calculated using a five-year rolling average of data from the 2020, 2021, 2022, 2023, and 2024 studies, where available. This new approach—first implemented in 2024—improves data accuracy and consistency by better capturing trends in SUI data and supporting more accurate estimates of regional SUI waste generation. In previous studies, 2018 unit weights were used for consistency. Following the sorting of each sample, every item category of SUI was weighed and counted. Although materials were individually weighed, analysis was based on the five-year rolling

average unit weights, except for certain items where data was limited and a reliable unit weight could not be determined. In these cases, the following exceptions were applied:

- Rigid Plastic Cups Labelled Compostable – This uses the same unit weight as Rigid Plastic Cups.
- Plastic Takeout Containers Labelled Compostable – This uses the average unit weight using 2024 data.
- Other Foodware Labelled Compostable – This uses the average unit weight using 2024 data.
- Paper Utensils – This uses the average unit weight using 2024 data.

This change is new to the 2024 study and rolling average unit weights will be used in waste composition studies going forward. However, due to this change in methodology, single-use item counts in 2024 are not comparable to prior years. In future studies, Metro Vancouver will explore applying the updated methodology to prior years to examine trends.

The waste generated per capita (kg/capita) for SUI was calculated using the collected sample data and extrapolated using regional disposal tonnages and population data. The collected data was also combined to provide a estimated total disposal for SUI. The number of SUI disposed per capita (unit/capita) was calculated from the counts, waste generation per capita, and unit weights for each SUI category.

2.3.1 Determining Outliers

In 2024, a new method was used to determine outliers for each sector. This methodology will be applied to future full scale composition studies.

2.3.1.1 Single-Family and Multi-Family

Box and whiskers plot method was used to determine outliers, in which only 2 samples from single-family were classified as outliers. The box and whiskers plot is a statistical plot that displays the interquartile range, which represents the spread of the middle 50% of data and therefore allows identification of outliers. Single-family and multi-family SUI counts have low to no presence of zeroes, which commonly skew the results for interquartile range method, allowing outliers to be easily identified. Conversely, CI has high presence of zeroes and cannot use this method.

2.3.1.2 Commercial/Institutional

Over the past four years (2021 - 2024), historical waste composition data consistently showed a significant number of samples with higher quantities of SUIs. This pattern has presented every year for the past four years, indicating that such occurrences are not anomalies but rather a recurring feature. Upon closer examination of these so-called "outliers," it becomes clear that including them in the analysis provides a more accurate reflection of the region’s actual waste profile. Rather than dismissing these data points, it is recognized that they likely represent genuine trends in local waste generation.

2.3.1.3 Small Loads

Outliers among small loads will be assessed individually by comparing each case to historical waste composition data and the SUI counts. For the year of 2024, no small loads samples were classified as outliers.

3.0 Results

3.1 Waste Composition Results

The following sections present the waste composition results reported as weighted average percentages by primary material category. All percentages calculated in the section refer to the percentage of material in comparison to the total amount of sampled materials. Weighted average percentages were calculated by combining all sample data for each sector (SF, MF, CI, and SL). Combined percentages apply each sector's weighted average by the proportional tonnage generated by each sector. Each set of results had a 90% confidence interval calculated which determines the level of consistency between samples. The largest primary category components for each set of results (>10%) are highlighted in the tables presented in this section. Waste composition results for all categories by sector are included in **Appendix D**. Select photographs from the field audit are included in **Appendix E.**

3.1.1 Single-Family (SF) Waste Composition

Figure 1 presents weighted average waste composition of garbage by primary category for the SF sector. The largest components by weight were compostable organics and plastic (24% each), followed by paper (19%), and household hygiene (15%). Compostable organics mainly comprised unavoidable food waste (8% of total composition), which refers to waste produced from food preparation, such as eggshells, bones, and tea bags. Plastic mainly consisted of flexible packaging, and durable plastic products (3% each). The largest components found in the paper category were other compostable paper (8%) such as paper plates, tissue, and food-soiled paper. Diapers were the largest component within the household hygiene category of waste, comprising 8% of the overall SF sample.

Figure 1: Single-Family Waste Composition – Garbage

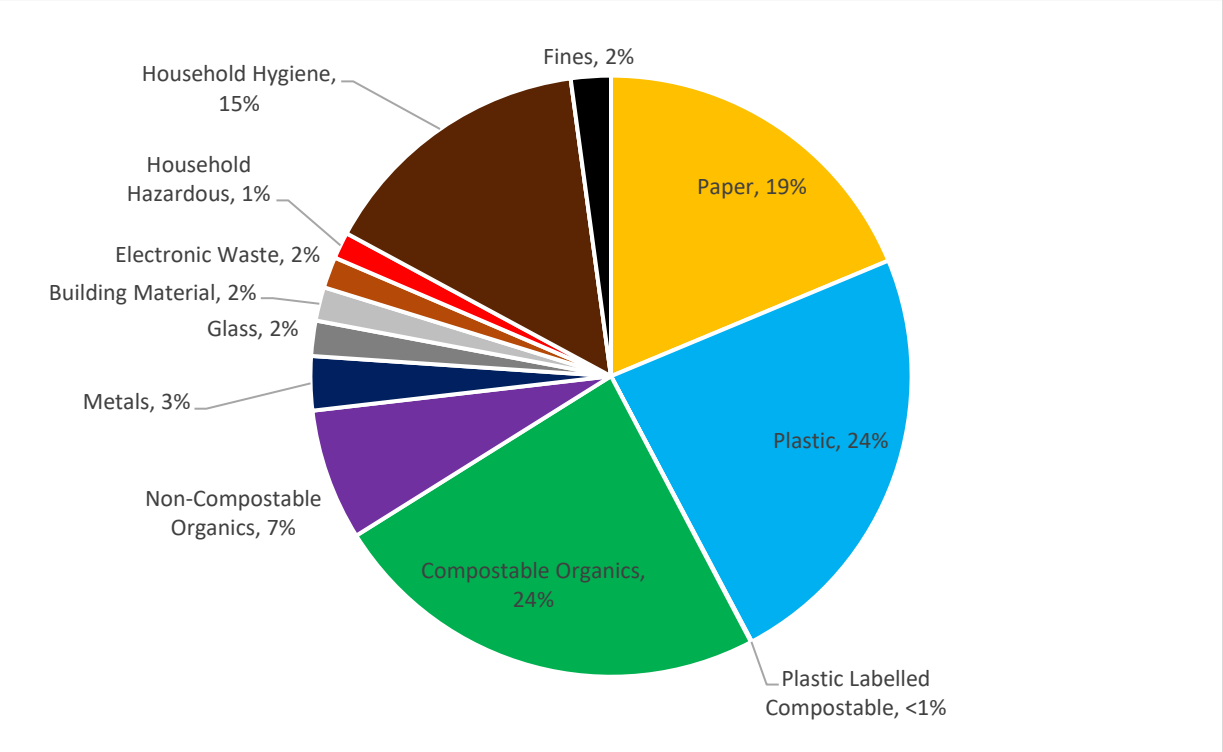


Table 2 summarizes the SF garbage waste composition results and the 90% confidence intervals. The calculated confidence intervals for the primary material categories were ≤3%, indicating low variability between SF samples. Materials which comprise more than 10% of the waste stream are highlighted in blue.

Table 2: Single-Family Waste Composition – Garbage

Primary Category	Average[1] (n=18)	90% Confidence Interval
Paper	19%	±2%
Plastic	24%	±2%
Plastic Labelled Compostable	<1%	±3%
Compostable Organics	24%	±2%
Non-Compostable Organics	7%	-
Metals	3%	±1%
Glass	2%	±1%
Building Material	2%	±1%
Electronic Waste	2%	±1%
Household Hazardous	1%	±3%
Household Hygiene	15%	-
Bulky Objects	-	-
Fines	2%	-

[1]All percentages in the results section were rounded to the nearest whole number. Percentages may not add up to 100%.

3.1.2 Multi-Family (MF) Waste Composition

Figure 2 presents the weighted average waste composition of garbage by primary category for the MF sector. The largest components by weight were compostable organics (28%) followed by plastic (21%), paper (18%), and household hygiene (14%). Unavoidable food waste (11%) constituted the largest component of compostable organics. The largest components found in the plastic category were durable plastic products (3%). For paper, the largest component was other compostable paper (7%). Pet waste was the largest component within the household hygiene category of waste, comprising 6% of the overall MF sample.

Figure 2: Multi-Family Waste Composition – Garbage

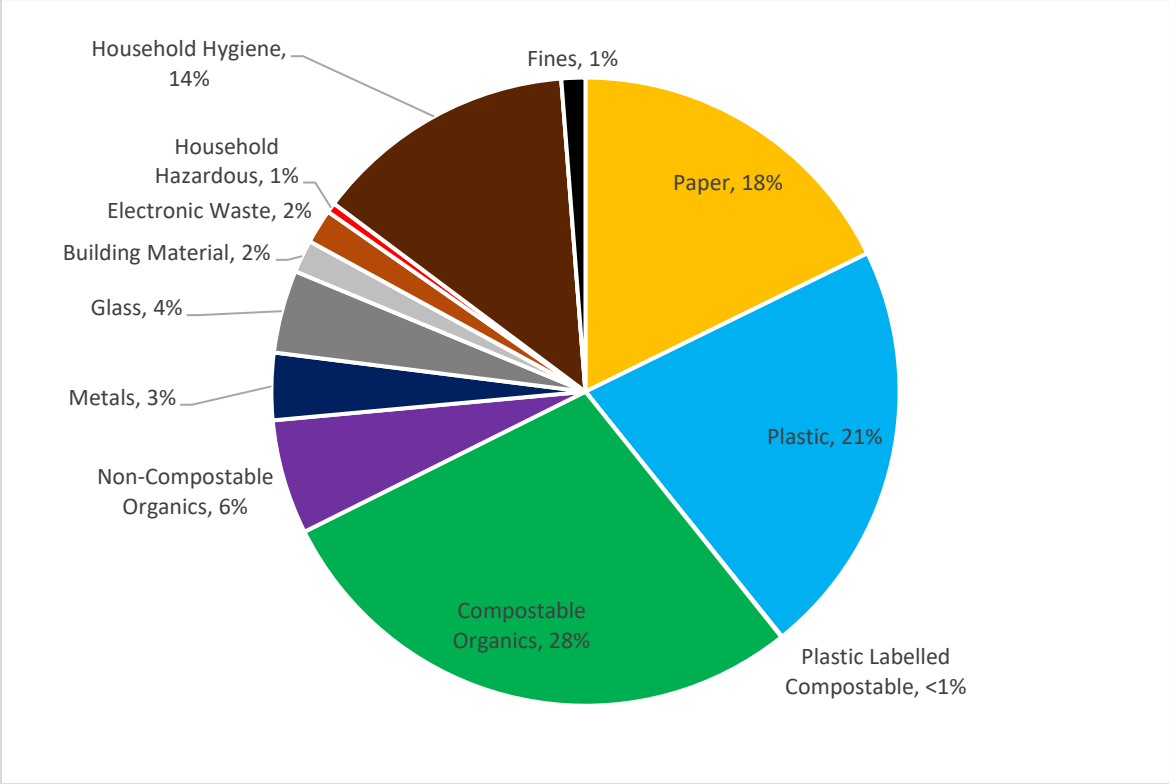


Table 3 summarizes the MF garbage waste composition results and the 90% confidence intervals. The calculated confidence intervals for the primary material categories were low (≤3%), indicating low variability between MF samples. Materials which comprise more than 10% of the waste stream are highlighted in blue.

Table 3: Multi-Family Waste Composition – Garbage

Primary Category	Average[1] (n=20)	90% Confidence Interval
Paper	18%	±2%
Plastic	21%	±2%
Plastic Labelled Compostable	<1%	±3%
Compostable Organics	28%	±2%
Non-Compostable Organics	6%	±1%
Metals	3%	±1%
Glass	4%	±1%
Building Material	2%	±1%
Electronic Waste	2%	-
Household Hazardous	1%	±3%
Household Hygiene	14%	-
Bulky Objects	-	-
Fines	1%	-

[1]All percentages in the results section were rounded to the nearest whole number. Percentages may not add up to 100%.

3.1.3 Commercial/Institutional (CI) Waste Composition

Figure 3 presents the weighted average waste composition of garbage by primary category for the CI sector. The largest components by weight were compostable organics (22%), followed by plastic and paper (19% each), and non-compostable organics (18%). Compostable organics consisted mostly of unavoidable food waste (6%) and other wood (5%). The largest components found in the plastic category were other durable plastic products (6%). Paper consisted mostly of other compostable paper (5%) and clean recyclable Old Corrugated Cardboard (OCC) (4%). Non-compostable organics were mainly comprised of pressured treated wood (9%) and finished wood (6%).

Figure 3: Commercial/Institutional Waste Composition – Garbage

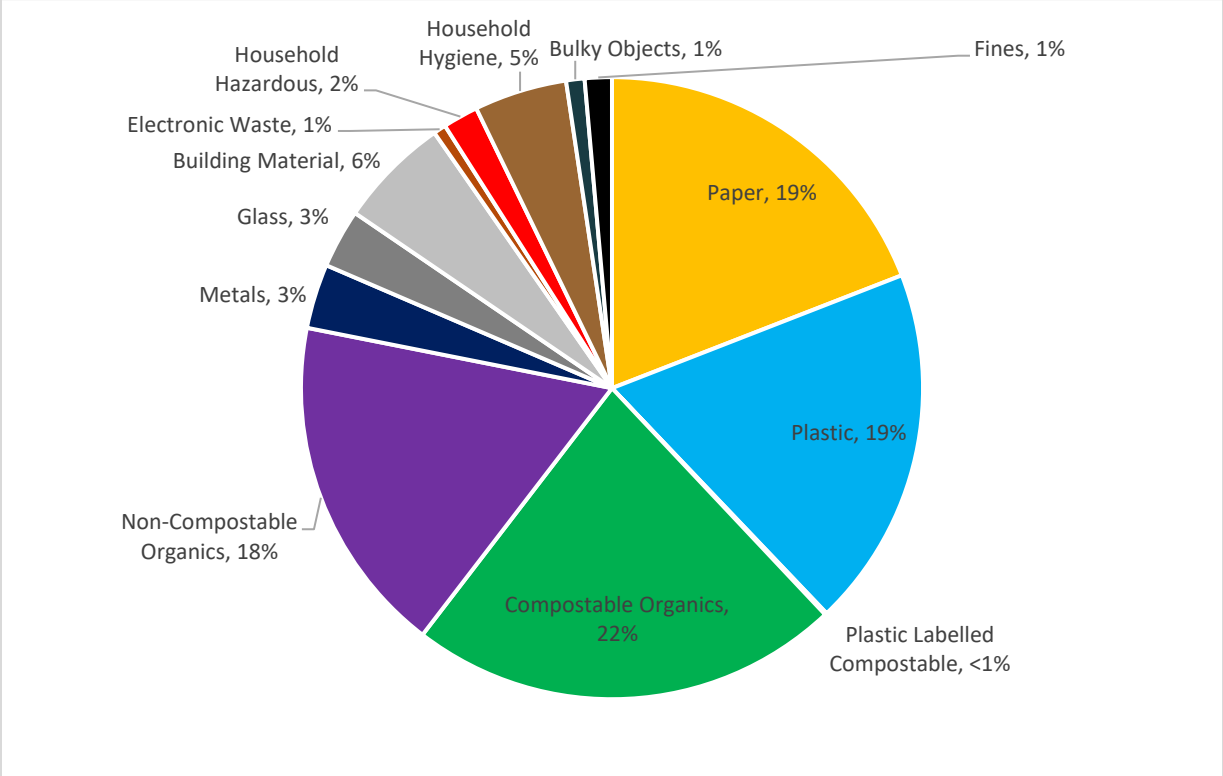


Table 4 summarizes the CI garbage waste composition results and the 90% confidence intervals. Although the calculated confidence intervals for the primary material categories were low (≤7%), indicating fairly low variability between CI samples. Materials which comprise more than 10% of the waste stream are highlighted in blue. At ≤7%, variation in the CI sector is higher than those in the residential sectors suggesting greater inconsistency in the values.

Table 4: Commercial/Institutional Waste Composition – Garbage

Primary Category	Average[1] (n=37)	90% Confidence Interval
Paper	19%	±4%
Plastic	19%	±4%
Plastic Labelled Compostable	<1%	±5%
Compostable Organics	22%	±7%
Non-Compostable Organics	18%	±1%
Metals	3%	±2%
Glass	3%	±3%
Building Material	6%	±1%
Electronic Waste	1%	±1%
Household Hazardous	2%	±3%
Household Hygiene	5%	±1%

Primary Category	Average[1] (n=37)	90% Confidence Interval
Bulky Objects	1%	±1%
Fines	1%	-

[1]All percentages in the results section were rounded to the nearest whole number. Percentages may not add up to 100%.

3.1.4 Small Load (SL) Waste Composition

Figure 4 presents the weighted average waste composition of garbage by primary category for the SL sector. The largest components by weight were non-compostable organics (39%), followed by plastic (12%), and bulky objects (11%). Non-compostable organics mainly comprised of finished wood (25%) and finished wood furniture (7%). Plastics consisted mostly of durable plastic products (5%), and bulky objects were mostly comprised of other upholstered furniture (9%).

Figure 4: Small Load Waste Composition – Garbage

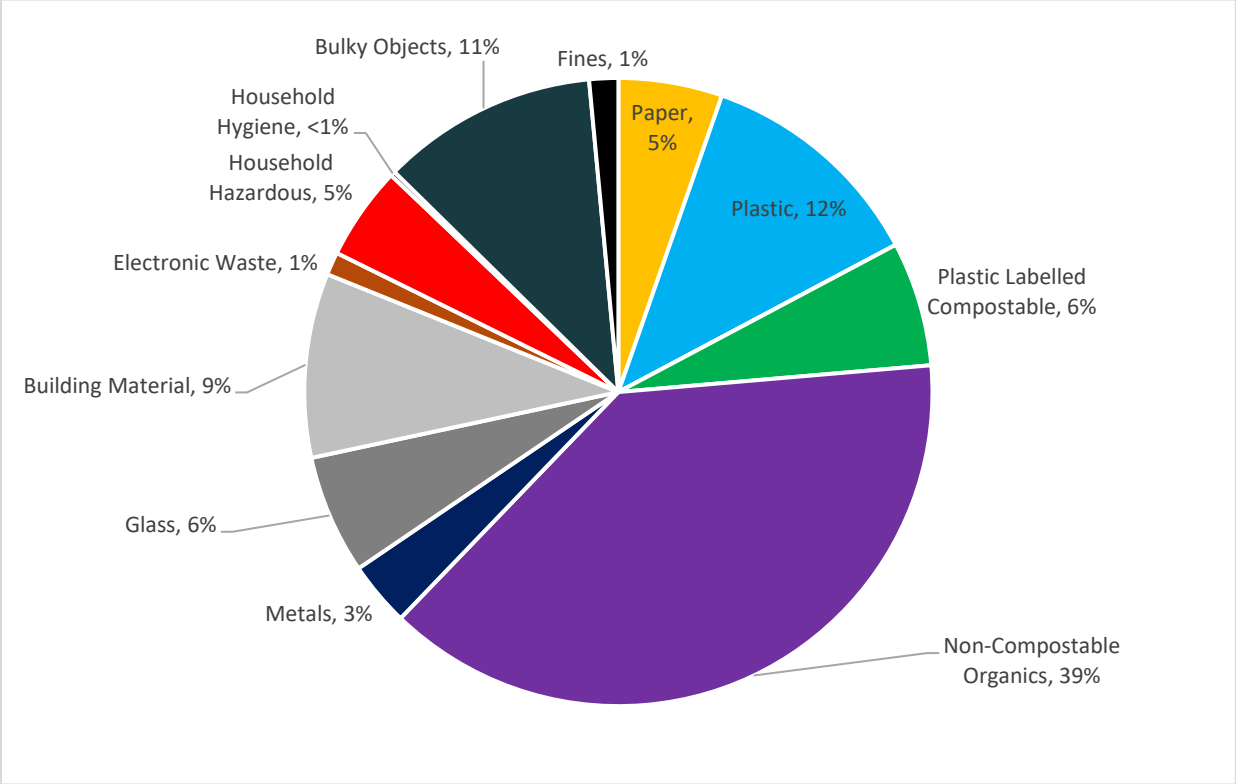


Table 5 summarizes the SL garbage waste composition results and the 90% confidence intervals. The calculated confidence intervals for the primary material categories were higher than in other sectors, with the highest at 9%. This indicates higher variation between SL samples due to waste loads in this sector consisting of varied composition and total weight. Materials which comprise more than 10% of the waste stream are highlighted in blue.

Table 5: Small Load Waste Composition – Garbage

Primary Category	Average[1] (n=25)	90% Confidence Interval
Paper	5%	±2%
Plastic	12%	±5%
Plastic Labelled Compostable	-	-
Compostable Organics	6%	±5%
Non-Compostable Organics	39%	±9%
Metals	3%	±2%
Glass	6%	±6%
Building Material	9%	±5%
Electronic Waste	1%	±1%
Household Hazardous	5%	±6%
Household Hygiene	<1%	-
Bulky Objects	11%	±7%
Fines	1%	±2%

[1]All percentages in the results section were rounded to the nearest whole number. Percentages may not add up to 100%.

3.1.5 Combined Waste Composition Results

Figure 5 presents the weighted average waste composition of garbage by primary category for all combined sectors. The largest components by weight were compostable organics (22%), followed by plastic (19%), paper (17%), and non-compostable organics (15%). Seven percent of compostable organic waste was unavoidable food waste and 3% consisted of avoidable food waste like unfinished meals, whole meat, baked goods, and full ready-made meals. Plastics were comprised mostly of durable plastic products (5%). The largest component found in the paper category was other compostable paper (5%). Non-compostable organics consisted mostly of finished wood (7%) and pressure-treated wood (4%).

Figure 5: Combined Waste Composition – Garbage

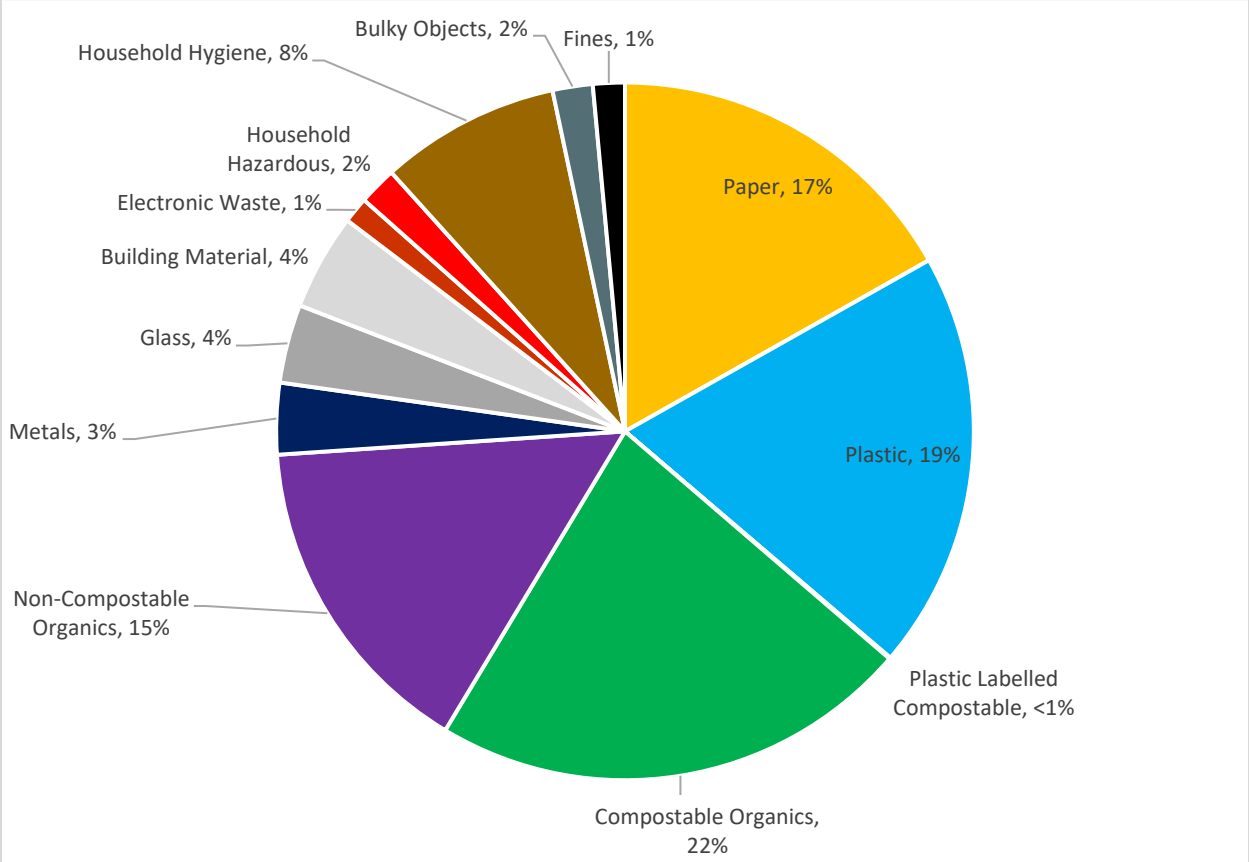


Table 6 summarizes the combined sector garbage waste composition results and the 90% confidence intervals. The calculated confidence intervals for the primary material categories (≤4%) reflected the expected variation for a given primary category. Materials which comprise more than 10% of the waste stream are highlighted in blue.

Table 6: Combined Waste Composition – Garbage

Primary Category	Average[1] (n=98)	90% Confidence Interval
Paper	17%	±2%
Plastic	19%	±2%
Plastic Labelled Compostable	<1%	-
Compostable Organics	22%	±2%
Non-Compostable Organics	15%	±4%
Metals	3%	±1%
Glass	4%	±2%
Building Material	4%	±2%
Electronic Waste	1%	-
Household Hazardous	2%	±1%
Household Hygiene	8%	±3%
Bulky Objects	2%	±3%
Fines	1%	±1%

[1]All percentages in the results section were rounded to the nearest whole number. Percentages may not add up to 100%.

3.2 Waste Disposal

This section presents the regional disposal for all primary categories. Data is presented by sector, total residential (SF and MF sectors), and all sectors combined. Per-capita disposal estimates are included for the SF and MF sectors.

3.2.1 Residential Waste (kg/capita)

Table 7 summarizes the residential waste disposal rates by material. These estimated disposal rates were calculated using the percent composition data collected during auditing and extrapolating using regional disposal and population data. Disposal rates were provided - the SF disposal rate was 87.5kg/capita and the MF disposal rate was 205.0 kg/capita. The combined residential disposal rate was 141.2 kg/capita. Compostable organics was the most disposed material by weight for both SF and MF at 20.8 kg/capita and 58.1kg/capita, respectively. Plastics and paper were the second and third most disposed categories by weight for both SF and MF. MF disposal rates for the top three waste categories are more than doubled compared to SF. The top three MF waste categories by disposal rate were: compostable organics, plastic, and paper.

Table 7: Residential Waste Disposal (kg/capita)

	Single-Family			Multi-Family			Overall Residential	
Disposed Tonnage	**142,137**			**279,747**			**421,884**	
Population	**1,623,607**			**1,364,620**			**2,988,227**	
Primary Category	**% Composition[1]**	**Disposal by Primary Category (kg/capita)**	**90% Confidence Interval (kg/capita)**	**% Composition[1]**	**Disposal by Primary Category (kg/capita)**	**90% Confidence Interval (kg/capita)**	**% Composition[1]**	**Disposal by Primary Category (kg/capita)**
Paper	19%	16.4	±0.3	18%	36.4	±0.6	18%	25.5
Plastic	24%	20.6	±0.4	21%	44.1	±0.8	22%	31.3
Plastic Labelled Compostable	<1%	0.0	-	<1%	0.1	-	<1%	0.1
Compostable Organics	24%	20.8	±0.6	28%	58.1	±1.6	27%	37.9
Non-Compostable Organics	7%	6.2	±0.1	6%	12.1	±0.2	6%	8.9
Metals	3%	2.5	-	3%	7.1	-	3%	4.6
Glass	2%	1.7	-	4%	8.7	±0.1	3%	4.9
Building Material	2%	1.6	-	2%	3.5	-	2%	2.4
Electronic Waste	2%	1.5	-	2%	3.6	-	2%	2.5
Household Hazardous	1%	1.3	-	1%	1.0	-	1%	1.2
Household Hygiene	15%	13.1	±0.3	14%	27.8	±0.7	14%	19.8
Bulky Objects	-	0.0	-	-	0.0	-	<1%	0.0
Fines	2%	1.9	-	1%	2.5	-	2%	2.2
Total	-	**87.5**		18%	**205.0**	-		141.2

[1]All percentages in the results section were rounded to the nearest whole number. Percentages may not add up to 100%.

3.2.2 All Waste Disposal (Tonnage by Sector)

Table 8 summarizes the waste disposal for all sectors. These estimated disposed tonnages were calculated using the percent composition data collected during auditing and extrapolating using regional disposal data.

Table 8: Estimated Waste Disposal by Primary Category

	Single-Family			Multi-Family			Commercial/Institutional			Small Load			Combined Waste Composition	
Disposed Tonnage	**142,137**			**279,747**			**397,522**			**123,120**			**942,526**	
Population	**1,623,607**			**1,364,620**			-			-			**2,988,227**	
Primary Category	**% Composition[1]**	**Disposal by Primary Category (tonnes)**	**90% Confidence Interval (tonnes)**	**% Composition[1]**	**Disposal by Primary Category (tonnes)**	**90% Confidence Interval (tonnes)**	**% Composition[1]**	**Disposal by Primary Category (tonnes)**	**90% Confidence Interval (tonnes)**	**% Composition[1]**	**Disposal by Primary Category (tonnes)**	**90% Confidence Interval (tonnes)**	**% Composition[1]**	**Disposal by Primary Category (tonnes)**
Paper	19%	26,604	±500.5	18%	49,628	±796	19%	75,881	±3194.9	5%	6,585	±136.4	17%	158,698
Plastic	24%	33,428	±696.8	21%	60,139	±1024	19%	74,708	±2714.2	12%	14,630	±751	19%	182,905
Plastic Labelled Compostable	<1%	74	±0	<1%	100	±0	<1%	393	±0.2	<1%	0	0	<1%	566
Compostable Organics	24%	33,844	±1048.5	28%	79,347	±2158.6	22%	89,231	±4028.5	6%	7,888	±386.9	22%	210,309
Non-Compostable Organics	7%	10,047	±177.6	6%	16,519	±294.7	18%	70,300	±4772.1	39%	47,475	±4,341.3	15%	144,341
Metals	3%	4,133	±20.2	3%	9,652	±63.9	3%	13,340	±152.8	3%	4,077	±67	3%	31,201
Glass	2%	2,692	±18.4	4%	11,929	±176.3	3%	12,146	±260.6	6%	7,544	±479.7	4%	34,311
Building Material	2%	2,573	±27.9	2%	4,712	±51.9	6%	23,072	±722.1	9%	11,676	±556.1	4%	42,033
Electronic Waste	2%	2,380	±15.7	2%	4,947	±49.4	1%	2,586	±13	1%	1,453	±8.9	1%	11,367
Household Hazardous	1%	2,032	±10.7	1%	1,428	±2.4	2%	7,293	±69.5	5%	5,937	±339.4	2%	16,689
Household Hygiene	15%	21,280	±563.1	14%	37,907	±966.4	5%	19,177	±492.6	<1%	298	±0.5	8%	78,662
Bulky Objects	<1%	0	±0	<1%	0	±0	1%	3,801	±37.9	11%	13,719	±940	2%	17,520
Fines	2%	3,049	±7.3	1%	3,441	±11.2	1%	5,597	±46.7	1%	1,837	±28.6	1%	13,923
Total	-	**142,137**	-	-	**279,747**	-	-	**397,522**		-	**123,120**	-	-	**942,525**

[1]All percentages in the results section were rounded to the nearest whole number. Percentages may not add up to 100%.

3.2.3 Historical Comparison

The following figures (**Figure 6** to **Figure 9**) show the historical comparisons in each of the sample sectors from 2013 to 2024 by estimated disposal tonnage. Sampling for full-scale waste composition studies typically occurs in the fall. **Figure 10** shows the combined historical comparison for all sample sectors. Findings are discussed in **Section 3.2.3.1**.

Figure 6: Single-Family Historical Comparison 2013 – 2024

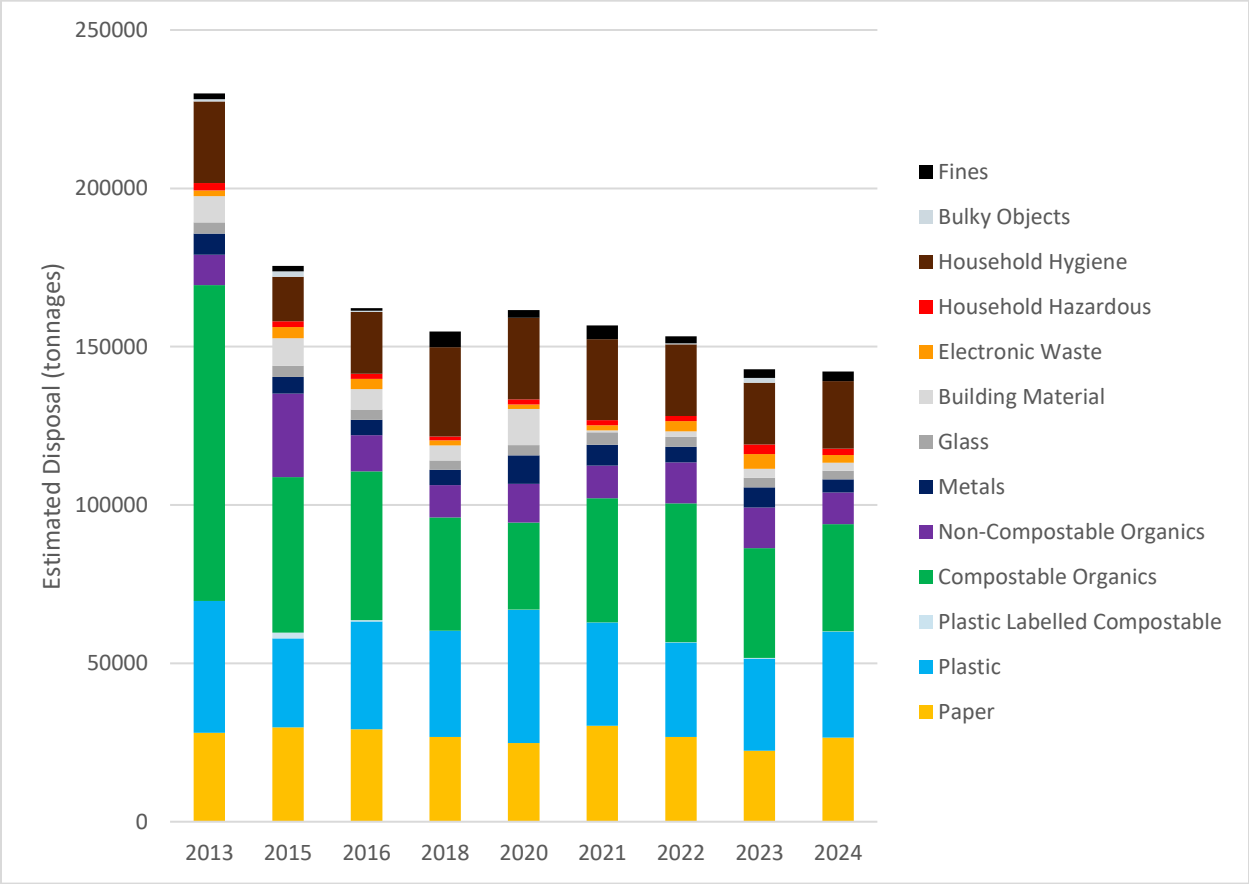


Figure 7: Multi-Family Historical Comparison 2013 – 2024

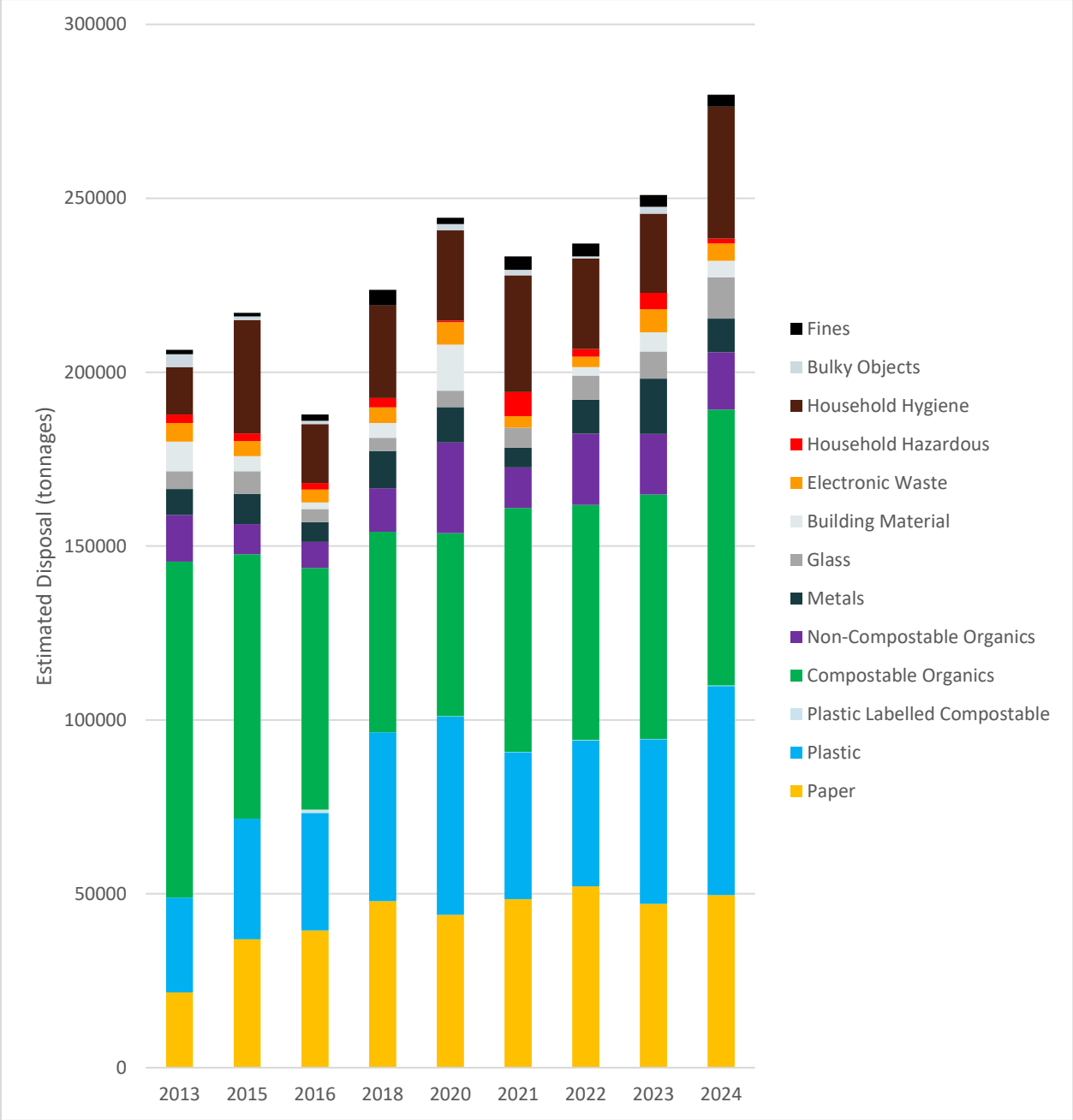


Figure 8: Commercial/Institutional Historical Comparison 2013 – 2024

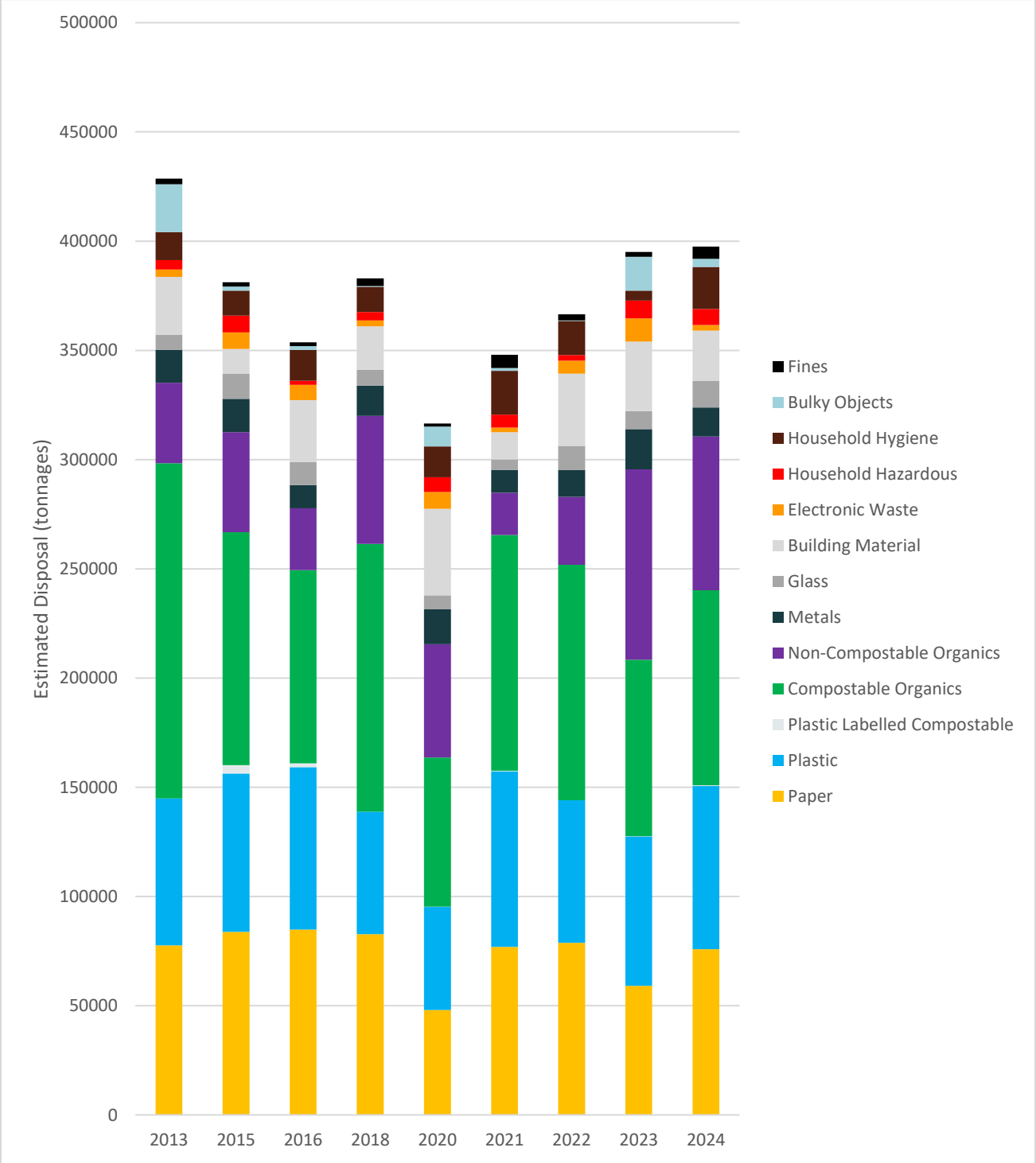


Figure 9: Small Load Historical Comparison 2013 – 2024

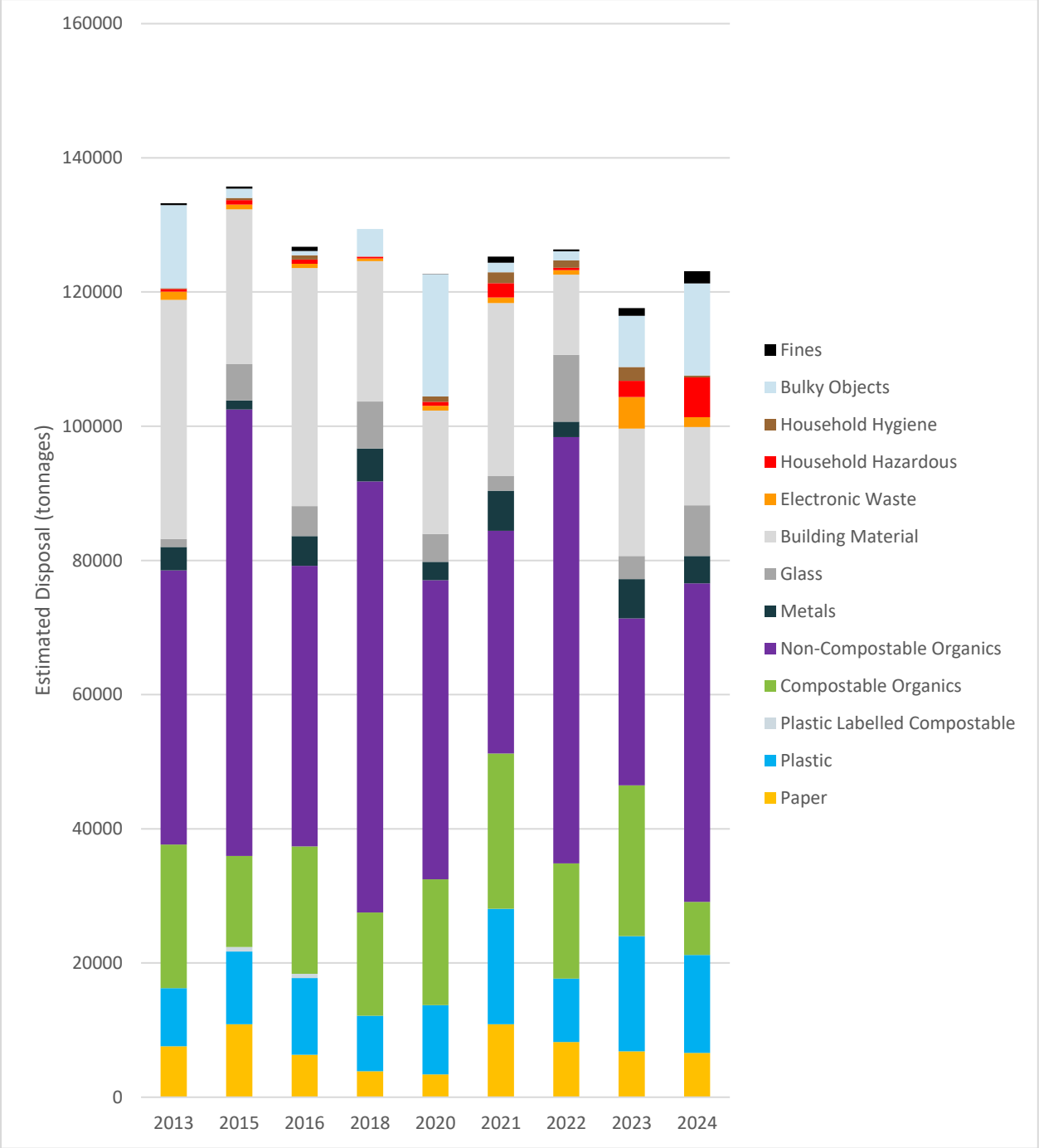
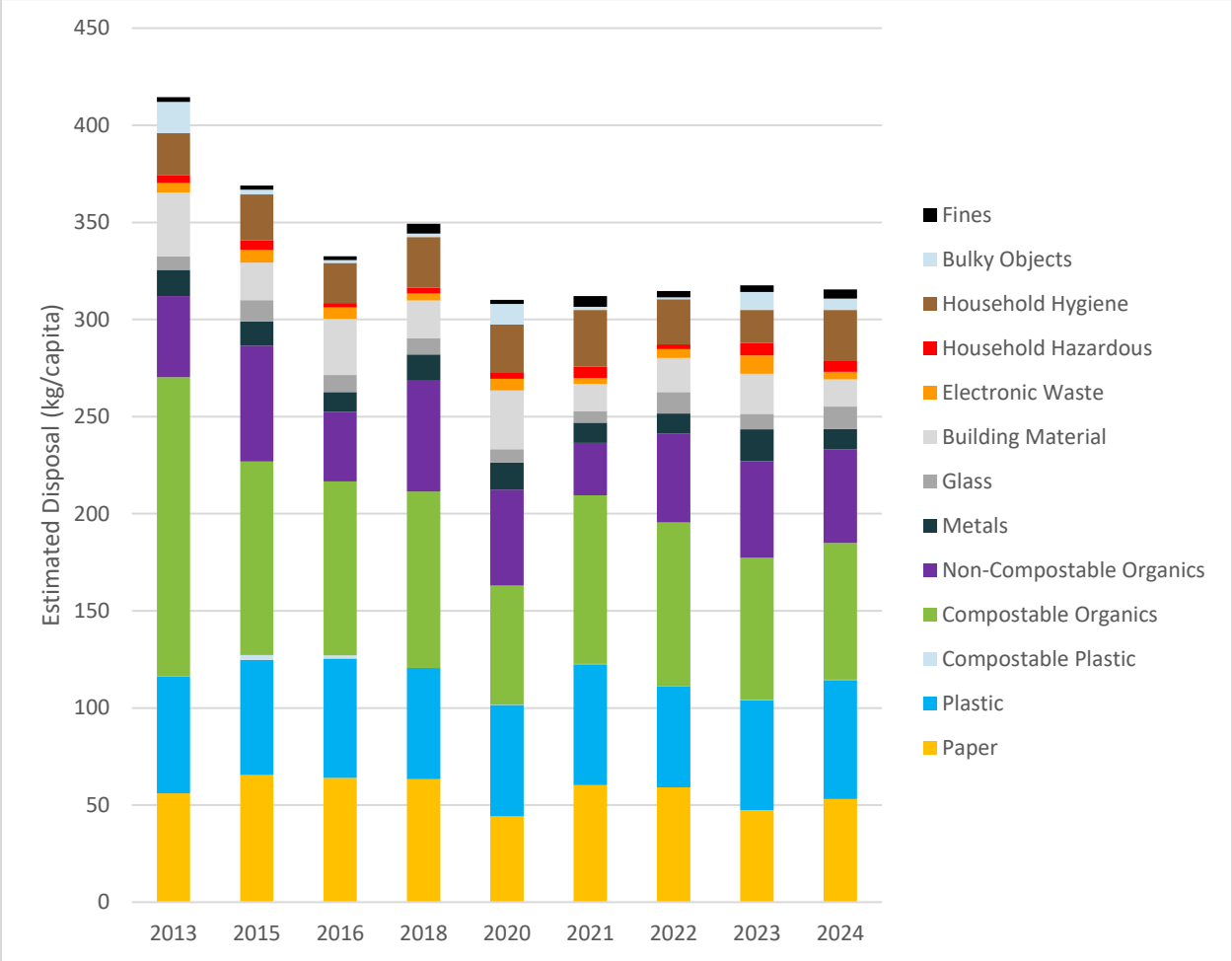


Figure 10: Combined All Sectors Historical Comparison 2013 – 2024



3.2.3.1 Summary of Historical Comparison

Waste composition has stayed similar and comparable between 2021 and 2024. Interestingly, the downward trend in disposal by the SF and SL sectors seems offset by the upward trend in CI, and to a larger extent MF waste disposal increases.

Less compostable organics and building materials were disposed in 2024 compared to 2022 and 2023. More plastic and household hygiene materials were disposed.

Notable events in 2024 that may have influenced waste disposal trends in Metro Vancouver include:

- As of Dec. 20, 2023, the province banned single-use plastic utensils, and wooden forks and knives were only available on request; and
- Implementation of Provincial Single-Use Plastic Regulations: On July 15, 2024, British Columbia enforced new regulations banning plastic shopping bags and oxo-degradable plastic packaging. These measures aimed to reduce plastic waste in communities and prevent microplastic pollution.

The regulations are part of the CleanBC Plastics Action Plan, which outlines a phased approach to eliminating certain plastics through 2030.

Notable observations from waste composition data collected in 2024 to the previous year include:

- In the **SF sector**, the overall disposal rate is decreasing year over year and has plateaued between 2023 and 2024. Compared to 2023, the disposal rate of paper, plastic, and household hygiene products increased, while the quantity of all other categories decreased;
- In the **MF sector**, the quantity of paper, plastic, compostable organics, and household hygiene increased significantly compared to 2023;
- In the **CI sector**, the quantity of paper, plastic, and compostable organics, increased significantly compared to 2023;
- In the **SL sector**, the quantity of non-compostable organics, glass, and household hazardous, and bulky objects increased significantly compared to 2023; and
- **Overall,** the top four components of waste remains the same: compostable organics, plastic, paper and non-compostable organics. Compostable organics have a slight downward trend since 2021.

3.3 Recyclability

Recyclability is a new categorization in 2024. It refers to the potential end fate of an item, and its ability to be collected, processed, and transformed into a new product. Materials have been assigned one of five following 'recyclabilites':

- Green Bin: Items accepted in most green bin programs, such as food waste and food-soiled paper;
- Non-Recyclable: Items not suitable for recycling or composting, typically including contaminated or non-recyclable plastics, and composite materials;
- Recyclable – Residential Collection: Items accepted in Recycle BC recycling programs through curbside residential collection, such as paper, cardboard, plastic containers, and metal cans;
- Recyclable – Depot Drop-Off: Items accepted at most recycling and waste centres, including glass, film plastic, and plastic foam; and
- Recyclable – Specialty: Items that can be reused or recycled but may require return to retail locations or participation in specific programs.

The following section highlights the composition of the different end fates or recyclabilities within materials currently disposed of in the garbage stream. **Figure 11** presents the overall garbage composition by recyclability. Non-recyclable waste represents 36% of all waste audited followed by green bin (22%) and recyclable – specialty (17%). The most prevalent non-recyclable materials are finished wood (9%) and durable plastics products (5%). Green bin consisted mostly of unavoidable food waste (6%) and other compostable paper (5%), and recyclable-specialty were predominantly pet waste (3%) and other upholstered furniture (2%). Note that for pet waste, only dog waste is compostable and cat waste is considered garbage. However, it was difficult for sorters to differentiate during the audit. **Table 9** shows recyclabilities of materials by sector. Non-recyclable materials are the most predominant

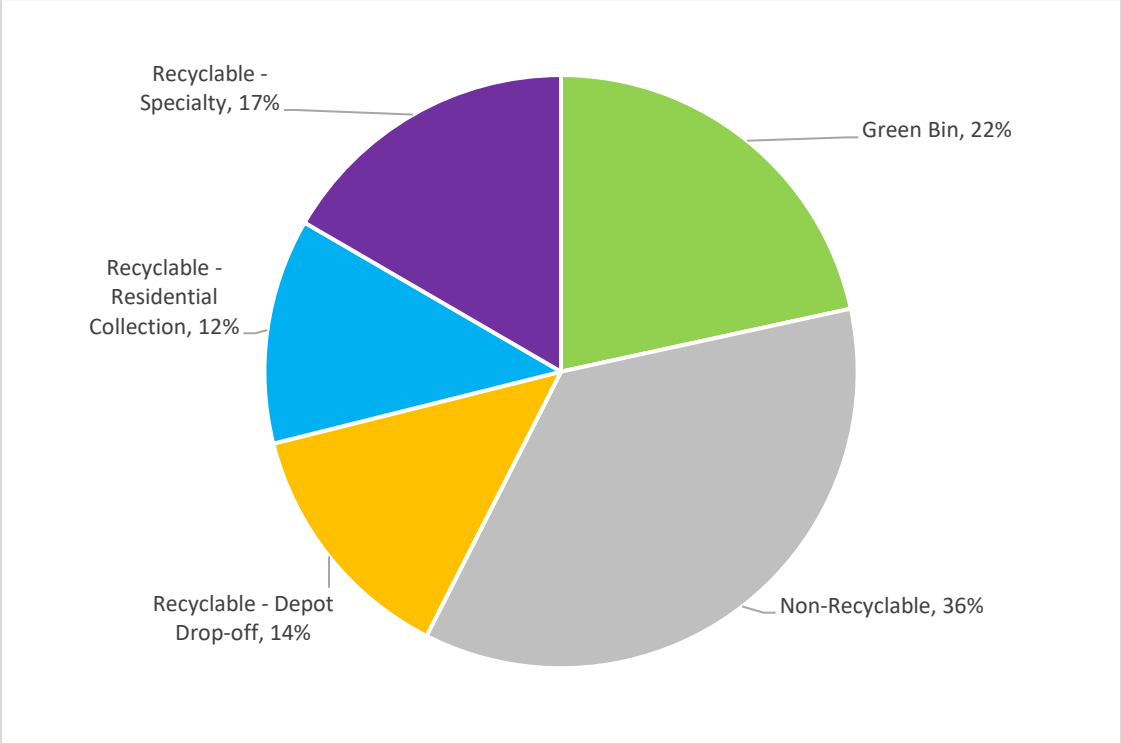
material across all sectors followed by green bin materials for single-family, multi-family, and CI sectors. Recyclable – specialty material is the second most predominant recyclability category found in small load samples.

Table 9 Recyclability of Materials by Sector

	Single-Family	Multi-Family	Commercial/Institutional	Small Loads	Overall
Green Bin	32%	35%	19%	4%	22%
Non-Recyclable	24%	19%	36%	62%	36%
Recyclable - Depot Drop-off	13%	11%	18%	9%	14%
Recyclable - Residential Collection	14%	16%	14%	5%	12%
Recyclable - Specialty	17%	18%	13%	21%	17%

Appendix B lists the recyclability and the assigned material categories.

Figure 11 Overall Garbage Composition by Recyclability



3.4 Functional Categories Composition

The waste composition study assigned a functional group describing the waste management model or end-fate of each material category. The following sections show the composition of the different functional categories for each waste stream and the combined adjusted values. Note that not all material categories were assigned a functional category, and some materials may be present in more than one functional category. The functional category assigned for material categories is provided in **Appendix C**.

3.4.1 Functional Categories Composition by Sector

The largest category by weight percentage of materials assigned a functional category for the SF and MF sectors was textile materials, which comprised mainly of other textiles such as stuffed toys and animals, masks, pet collars and leashes made of synthetic materials. The largest functional category by weight percentage in the CI and SL sector was construction & demolition (C&D) materials, such as insulation, linoleum, laminate, Stucco and etc. Since recyclability was introduced in 2024, functional category has changed and since the recyclable and green bin categories have been removed from functional categories, historic comparison charts are no longer included in this report.

Table 10 details garbage functional categories composition by sector.

Table 10: Functional Categories Composition by Sector

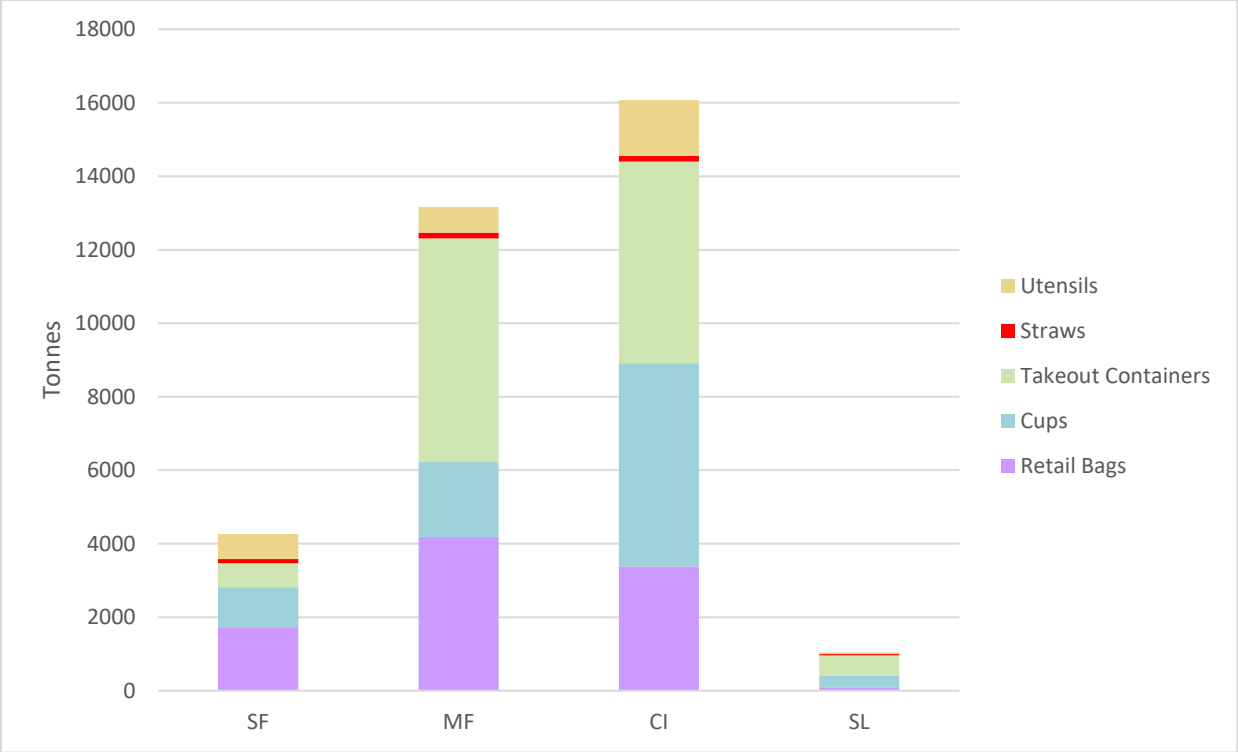
Functional Category	Definition	% Composition				
		SF[1]	MF[1]	CI[1]	SL[1]	Combined[1]
Construction & Demolition	Items typically generated by construction, demolition, or renovation activities	2%	2%	6%	9%	5%
Personal Protective Equipment	Personal protective equipment commonly used in response to the COVID-19 pandemic (masks, gloves, and disinfectant wipes)	1%	1%	1%	0%	1%
Single-Use Items	Single-use bags, cups, utensils, straws and takeout containers	3%	4%	3%	0%	3%
Textiles	Clothing, household textiles, footwear, and accessories	6%	6%	2%	3%	4%

[1]All percentages in the results section were rounded to the nearest whole number. Percentages may not add up to 100% and all other materials were categories as 'other' and not shown in this table.

3.5 Single-Use Item Disposal

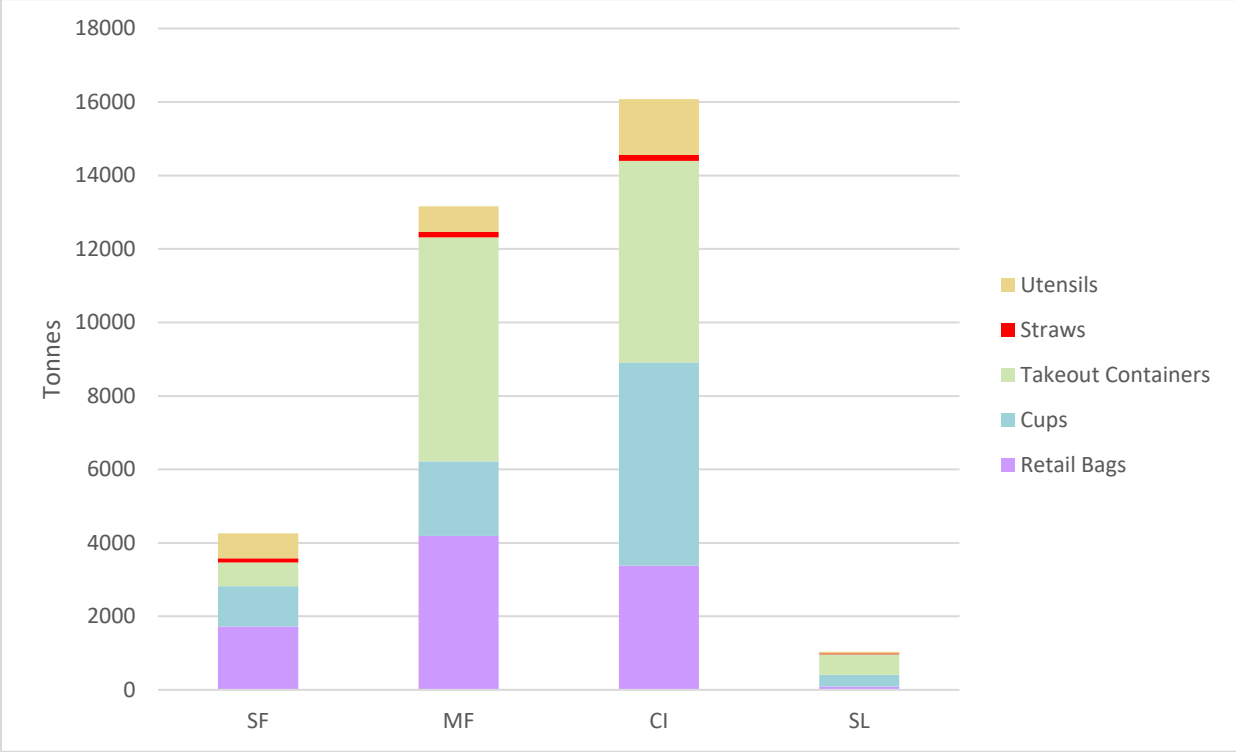
Metro Vancouver provided 2024 population data and facility inbound waste tonnages to be used with collected waste composition data, item counts, and 5-year rolling average unit weights to estimate the regional disposal rate of single-use item material categories. As mentioned in **Section 2.3**, SUI unit weights were calculated differently this year and this method will be used going forward. For MF and SF, sample outliers were determined using the box and whiskers plot method; two SL samples (14, and 43) were determined as outliers. All CI samples were evaluated and for SL, samples were assessed individually and compared against historic data. SUI disposal rate results without outlier samples are presented in the following section. Outlier samples were not removed from the analysis of waste and recyclability category composition as the outlier samples did not significantly influence results due to the low density of SUI materials. Due to the change in methodology in 2024, SUI counts are not comparable to previous years. Further analysis will be done on prior years to determine trends for counts based on the updated methodology.

Figure 12 Estimated SUI Disposal by Sector and Category



presents the 2024 estimated disposal tonnage of SUIs for each sector.

Figure 12 Estimated SUI Disposal by Sector and Category



SUIs, in general, were most common in the MF and CI sectors. The largest component of SUIs varied by sector, with takeout containers being most prevalent within the MF and SL sector, cups being the most prevalent in the CI sector, and retail bags being the most prevalent in the SF sector.

4.0 Limitations and Sources of Error

Limitations and potential sources of error for the study include the following:

- Due to the change from using 2018 reference weights to using 5-year rolling average unit weights for SUIs, some increased in weight, whereas others decreased. This could contribute to fluctuations in reported waste generation that are not reflective of actual changes in disposal behavior, but rather a result of the updated calculation methodology.
- Weights measured by the electronic scale can be inaccurate. These inaccuracies could be the result of operator errors during weighing (e.g., by not placing the scale on a level-surface or neglecting to keep the scale tared) or due to wear-and-tear on the scale. This was controlled by having field staff monitor and maintain proper scale use and retaining spare scales.
- Sample weights may change after being weighed in due to small materials being lost during sorting or transportation, and by changing moisture content from excessive rain or snow. This was most evident during a two-day period of high snowfall during the fourth week of sampling.
- Discrepancies between the weigh-in mass of the sample and the weigh-out mass, calculated by summing the net weights for each sorted item category can occur. This type of discrepancy may be the result of errors in recording the field data, either during weigh-in or when sorted categories are weighed. Such errors were monitored for by QA/QC procedures for error checking during data collection; as a result the errors were minor.
- Larger bulky or otherwise oddly shaped items may not have been effectively retrievable by the facility's loader or the field staff for sample collection. Such items were noted if detected.
- Personal wipes, sorted from samples as a PPE category, in certain cases may not be distinguishable from other tissues and sanitary wipes and therefore may not have been accurately weighed or counted.
- Metal food containers were not counted as an SUI in this study but will be considered for future studies.
- Categorization of recyclability has limitations, provided that the recyclable materials were originally suitable for recycling.

5.0 Closure and Professional Statement

This report was prepared exclusively for the purposes, project, and location outlined in this report. The report is based on the composition of the inbound material over a specific period of time, as indicated in the report. Although a reasonable analysis was conducted by Dillon, Dillon's analysis was by no means exhaustive. Rather, Dillon's report represents a reasonable review of the audit results as a "snapshot" in time. These results only reflect the conditions of the period of time in which they were collected. The audit results for the assessments that took place from November 2024 to December 2024 are those reflected in this report.

Dillon prepared this report for the sole benefit of Metro Vancouver. The material in the report reflects Dillon's best judgement in light of the information available at the time of preparation. Any use which a third party makes of this report, or any reliance on or decision based on it, are the responsibilities of such third parties.

Appendix A

Category Descriptions

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Paper	Fine, Office, Envelopes	Junk Mail, Flyers, Unaddressed Mail	Recyclable - Residential Collection		
Paper	Fine, Office, Envelopes	Other Fine Office Paper or Envelopes	Recyclable - Residential Collection		
Paper	Newsprint	Newsprint	Recyclable - Residential Collection		
Paper	OCC	Clean Recyclable OCC	Recyclable - Residential Collection		
Paper	OCC	Waxed OCC	Non-Recyclable		
Paper	OCC	Other Soiled OCC	Recyclable - Residential Collection		
Paper	Boxboard	Cereal Boxes and Other Box Packaging	Recyclable - Residential Collection		
Paper	Bound Paper Products	Telephone Books	Recyclable - Residential Collection		
Paper	Bound Paper Products	Magazines	Recyclable - Residential Collection		
Paper	Bound Paper Products	Books	Recyclable - Depot Drop-off		
Paper	Beverage Containers – Gabletop/Drink Box/Aseptic	Dairy or Dairy Substitute	Recyclable - Depot Drop-off		
Paper	Beverage Containers – Gabletop/Drink Box/Aseptic	Non-Dairy/Deposit	Recyclable - Depot Drop-off		
Paper	Other Paper	Plastic-Lined Paper Hot Cups	Recyclable - Residential Collection	SUI	Y
Paper	Other Paper	Plastic-Lined Paper Cold Cups	Recyclable - Residential Collection	SUI	Y
Paper	Other Paper	Plastic-Lined Paper Cups Labelled Compostable	Recyclable - Residential Collection	SUI	Y
Paper	Other Paper	Paper Straws	Green Bin	SUI	Y

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Paper	Other Paper	Unlined Paper Takeout Containers	Recyclable - Residential Collection	SUI	Y
Paper	Other Paper	Plastic-Lined Paper Takeout Containers	Recyclable - Residential Collection	SUI	Y
Paper	Other Paper	Plastic-Lined Paper Takeout Containers	Recyclable - Residential Collection	SUI	Y
Paper	Other Paper	Paper bags	Recyclable - Residential Collection	SUI	Y
Paper	Other Paper	Paper Party Décor	Recyclable - Residential Collection		
Paper	Other Paper	Other Recyclable Paper	Recyclable - Residential Collection		
Paper	Other Paper	Other Compostable Paper	Green Bin		
Paper	Other Paper	Non-compostable, Non-recyclable Paper	Non-Recyclable		
Plastic	Film	Re-Used Plastic Bags	Recyclable - Depot Drop-off	SUI	Y
Plastic	Film	Empty Plastic Bags	Recyclable - Depot Drop-off	SUI	Y
Plastic	Film	HDPE & LDPE Consumables Packaging Bags and Film	Recyclable - Depot Drop-off		
Plastic	Film	Other Flexible Plastic Packaging	Recyclable - Depot Drop-off		
Plastic	Film	Garbage & Recycling Bags	Non-Recyclable		
Plastic	Film	Freezer & Sandwich Bags	Recyclable – Depot Drop-off		
Plastic	Film	Deposit Beverage Pouches	Recyclable - Depot Drop-off		
Plastic	Film	Other Plastic Film	Recyclable - Depot Drop-off		
Plastic	Textiles (Synthetic)	Clothing and accessories	Recyclable - Specialty	Textiles	
Plastic	Textiles (Synthetic)	Household	Recyclable - Specialty	Textiles	
Plastic	Textiles (Synthetic)	Reusable bags	Recyclable - Specialty	Textiles	Y
Plastic	Textiles (Synthetic)	Other	Recyclable - Specialty	Textiles	

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Plastic	Rigid Beverage Containers	Dairy or Dairy Substitute	Recyclable - Depot Drop-off		
Plastic	Rigid Beverage Containers	Deposit Containers – Water	Recyclable - Depot Drop-off		
Plastic	Rigid Beverage Containers	Deposit Containers – Other	Recyclable - Depot Drop-off		
Plastic	Rigid Beverage Containers	Rigid Plastic Cups	Recyclable - Residential Collection	SUI	Y
Plastic	Rigid Beverage Containers	Other	Non-Recyclable		
Plastic	Rigid (non-beverage)	# 1 PETE – Bottles and Jars	Recyclable - Residential Collection		
Plastic	Rigid (non-beverage)	#1 PETE – Other Packaging	Recyclable - Residential Collection		
Plastic	Rigid (non-beverage)	#2 HDPE – Bottles and Jugs	Recyclable - Residential Collection		
Plastic	Rigid (non-beverage)	#2 HDPE – Tubs and Lids	Recyclable - Residential Collection		
Plastic	Rigid (non-beverage)	#3 PVC	Recyclable - Specialty		
Plastic	Rigid (non-beverage)	#4 LDPE	Recyclable - Residential Collection		
Plastic	Rigid (non-beverage)	#5 PP	Recyclable - Residential Collection		
Plastic	Rigid (non-beverage)	#6 PS – Non-Foam	Recyclable - Residential Collection		
Plastic	Rigid (non-beverage)	#6 PS – Packing Foam	Recyclable - Residential Collection		
Plastic	Rigid (non-beverage)	Foam Cups	Recyclable - Depot Drop-off	SUI	Y
Plastic	Rigid (non-beverage)	Foam Takeout Containers	Recyclable - Depot Drop-off	SUI	Y
Plastic	Rigid (non-beverage)	#6 PS – Foam Foodware	Recyclable - Depot Drop-off		
Plastic	Rigid (non-beverage)	#6 PS – Other PS Foam	Recyclable - Depot Drop-off		
Plastic	Rigid (non-beverage)	Other Foam	Recyclable - Depot Drop-off		
Plastic	Rigid (non-beverage)	Other Uncoded	Recyclable - Residential Collection		

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Plastic	Rigid (non-beverage)	#7 Mixed Resin Plastic	Recyclable - Residential Collection		
Plastic	Rigid (non-beverage)	Uncoded Packaging/Containers	Recyclable - Residential Collection		
Plastic	Rigid (non-beverage)	Rigid Plastic takeout Containers	Recyclable - Residential Collection	SUI	Y
Plastic	Rigid (non-beverage)	Non-durable plastic food containers	Recyclable – Residential Collection	SUI	
Plastic	Other	Durable Plastic Products	Non-Recyclable		
Plastic	Other	Plastic Straws	Recyclable - Residential Collection	SUI	Y
Plastic	Other	Plastic Utensils	Recyclable - Residential Collection	SUI	Y
Plastic	Other	Coffee Pods	Recyclable - Specialty		
Plastic	Other	Other/Mixed Plastics	Non-Recyclable		
Plastic Labelled Compostable	Foodware	Rigid Plastic Cups Labelled Compostable	Non-Recyclable	SUI	Y
Plastic Labelled Compostable	Foodware	"Plastic Takeout Containers Labelled Compostable"	Non-Recyclable	SUI	Y
Plastic Labelled Compostable	Foodware	Other Foodware Labelled Compostable	Non-Recyclable	SUI	Y
Plastic Labelled Compostable	Film	Plastic Bags Labelled Compostable	Non-Recyclable	SUI	Y
Plastic Labelled Compostable	Film	Bags and Liners Labelled Compostable	Non-Recyclable		
Plastic Labelled Compostable	Other Compostable Products and Packaging	Packaging, Bottles	Non-Recyclable		

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Compostable Organics	Yard & Garden	Small Yard Waste	Green Bin		
Compostable Organics	Yard & Garden	Large Yard Waste	Green Bin		
Compostable Organics	Food Waste - Unavoidable	Unavoidable Food Waste	Green Bin		
Compostable Organics	Food Waste - Avoidable	Plate Scrapings, Unfinished Meals	Green Bin		
Compostable Organics	Food Waste – Avoidable	Whole Fruits and Vegetables	Green Bin		
Compostable Organics	Food Waste – Avoidable	Whole Meats, Fish	Green Bin		
Compostable Organics	Food Waste – Avoidable	Full/Unused Ready-Made	Green Bin		
Compostable Organics	Food Waste – Avoidable	Baked Goods	Green Bin		
Compostable Organics	Food Waste – Avoidable	Dairy	Green Bin		
Compostable Organics	Food Waste – Avoidable	Liquids (drinks, oil in package)	Green Bin		
Compostable Organics	Food Waste – Avoidable	Candy and snacks	Green Bin		
Compostable Organics	Food Waste – Avoidable	Condiments and sauces	Green Bin		
Compostable Organics	Food Waste – Avoidable	Pet food	Green Bin		
Compostable Organics	Clean Wood	Wood Pallets	Recyclable - Depot Drop-off	C&D	
Compostable Organics	Clean Wood	Unfinished Wood Furniture	Recyclable – Depot Drop-off	C&D	

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Compostable Organics	Clean Wood	Wood Utensils	Green Bin	SUI	
Compostable Organics	Clean Wood	Other Wood	Recyclable – Depot Drop-Off	C&D	
Compostable Organics	Other Compostable Organics	Manure, Slaughterhouse, Animals	Recyclable - Specialty		
Non-compostable organics	Treated or Painted Wood	Pressure Treated Wood	Non-Recyclable	C&D	
Non-compostable organics	Treated or Painted Wood	Finished Wood	Non-Recyclable	C&D	
Non-compostable organics	Treated or Painted Wood	Finished Wood Furniture	Non-Recyclable	C&D	
Non-compostable organics	Textiles	Natural Fiber Clothing	Recyclable - Specialty	Textiles	
Non-compostable organics	Textiles	Household	Recyclable - Specialty	Textiles	
Non-compostable organics	Textiles	Reusable bags	Recyclable - Specialty	Textiles	
Non-compostable organics	Textiles	Other	Recyclable - Specialty	Textiles	
Non-compostable organics	Rubber	Tires	Recyclable - Depot Drop-off		

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Non-compostable organics	Rubber	Other Rubber	Non-Recyclable		
Non-compostable organics	Leather / Multiple/Composite Organic Materials	Leather	Non-Recyclable		
Non-compostable organics	Other	Composite Organic Materials (shoes)	Recyclable - Specialty	Textiles	
Non-compostable organics	Other	Other	Recyclable - Specialty		
Metals	Ferrous	Food Containers	Recyclable - Residential Collection		
Metals	Ferrous	Spiral-Wound Containers	Recyclable - Residential Collection		
Metals	Ferrous	Other Ferrous	Recyclable - Depot Drop-off		
Metals	Bimetallic	Food Containers	Recyclable - Residential Collection		
Metals	Non-Ferrous (copper, aluminum, brass)	Alcoholic	Recyclable - Depot Drop-off		
Metals	Non-Ferrous (copper, aluminum, brass)	Non-Alcoholic	Recyclable - Depot Drop-off		
Metals	Non-Ferrous (copper, aluminum, brass)	Food Containers	Recyclable - Residential Collection		
Metals	Non-Ferrous (copper, aluminum, brass)	Foil Trays, Wrap	Recyclable - Residential Collection		

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Metals	Non-Ferrous (copper, aluminum, brass)	Other Non-Ferrous	Recyclable - Residential Collection		
Metals	Non-Consumable Mixed Metals	Household	Recyclable - Depot Drop-off		
Metals	Non-Consumable Mixed Metals	Machine Parts	Recyclable - Specialty		
Metals	Non-Consumable Mixed Metals	Construction/Industrial	Recyclable - Specialty		
Glass	Beverage Containers	Beer	Recyclable - Depot Drop-off		
Glass	Beverage Containers	Other Alcohol	Recyclable - Depot Drop-off		
Glass	Beverage Containers	Non-Alcoholic & Non-Dairy	Recyclable - Depot Drop-off		
Glass	Beverage Containers	Dairy or Dairy Substitute	Recyclable - Depot Drop-off		
Glass	Food Containers	Food Containers	Recyclable - Specialty		
Glass	Other Glass and Ceramics	Other Glass and Ceramics	Non-Recyclable		
Glass	Other Glass and Ceramics	Light bulbs (Non-hazardous)	Recyclable - Depot Drop-off		
Building Material	Gypsum / Drywall	Gypsum/Drywall	Recyclable - Specialty	C&D	
Building Material	Masonry	Masonry	Recyclable - Specialty	C&D	
Building Material	Rock, Sand, Dirt	Rock, Sand, Dirt	Recyclable - Specialty	C&D	
Building Material	Rigid Asphalt	Rigid Asphalt	Recyclable - Specialty	C&D	
Building Material	Carpet Waste	Carpet	Recyclable - Specialty	C&D	

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Building Material	Carpet Waste	Underlay	Recyclable - Specialty	C&D	
Building Material	Other Inorganics	Other Inorganics	Non-Recyclable	C&D	
Electronic Waste	Computers and Peripherals	Desktop Computers	Recyclable - Depot Drop-off		
Electronic Waste	Computers and Peripherals	Notebook Computers	Recyclable - Depot Drop-off		
Electronic Waste	Computers and Peripherals	Computer Peripherals	Recyclable - Depot Drop-off		
Electronic Waste	Computers and Peripherals	Computer Monitors	Recyclable - Depot Drop-off		
Electronic Waste	Computers and Peripherals	Printers, Scanners	Recyclable - Depot Drop-off		
Electronic Waste	Televisions & AV Equipment	Televisions	Recyclable - Depot Drop-off		
Electronic Waste	Televisions & AV Equipment	Other Audio/Video	Recyclable - Depot Drop-off		
Electronic Waste	Telephones & Telecommunications Equipment	Mobile Phones & Accessories	Recyclable - Depot Drop-off		
Electronic Waste	Telephones & Telecommunications Equipment	Other	Recyclable - Depot Drop-off		
Electronic Waste	Small Appliances & Floor Care Appliances	Small Appliances & Floor Care Appliances	Recyclable - Depot Drop-off		
Electronic Waste	Electronic Toys	Electronic Toys	Recyclable - Depot Drop-off		

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Electronic Waste	Smoke Detectors	Smoke Detectors	Recyclable - Depot Drop-off		
Electronic Waste	Other Electronics	Other Electronics	Recyclable - Depot Drop-off		
Household Hazardous	Batteries	Lead Acid	Recyclable - Depot Drop-off		
Household Hazardous	Batteries	Household Batteries (Non Lithium-Ion)	Recyclable - Depot Drop-off		
Household Hazardous	Batteries	Lithium Ion Batteries	Recyclable - Depot Drop-off		
Household Hazardous	Medical/Biological	Sharps	Non-Recyclable		
Household Hazardous	Medical/Biological	Animal Carcass	Recyclable - Specialty		
Household Hazardous	Medical/Biological	Other	Non-Recyclable		
Household Hazardous	HHW	Stains/Preservatives	Recyclable - Depot Drop-off		
Household Hazardous	HHW	Latex Paint	Recyclable - Depot Drop-off		
Household Hazardous	HHW	Oil-Based Paint	Recyclable - Depot Drop-off		
Household Hazardous	HHW	Paint Aerosols	Recyclable - Depot Drop-off		
Household Hazardous	HHW	Solvents	Recyclable - Depot Drop-off		
Household Hazardous	HHW	Cleaners, Soaps etc.	Non-Recyclable		
Household Hazardous	HHW	Pesticides/Herbicides/Preservatives	Recyclable - Depot Drop-off		

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Household Hazardous	HHW	Motor Oil	Recyclable - Depot Drop-off		
Household Hazardous	HHW	Oil Filters	Recyclable - Depot Drop-off		
Household Hazardous	HHW	Antifreeze	Recyclable - Depot Drop-off		
Household Hazardous	HHW	Pharmaceuticals	Recyclable - Specialty		
Household Hazardous	HHW	Other Petroleum Based Products	Recyclable - Specialty		
Household Hazardous	HHW	Other	Recyclable - Specialty		
Household Hazardous	Mercury Containing Items	Thermostats and Switches	Recyclable - Depot Drop-off		
Household Hazardous	Mercury Containing Items	CFLs	Recyclable - Depot Drop-off		
Household Hazardous	Other HHW	Other HHW or Containers	Recyclable - Specialty		
Household Hazardous	Biological	Diapers	Non-Recyclable		
Household Hygiene	Biological	Pet Waste	Recyclable - Specialty		
Household Hygiene	Biological	Other (sanitary products, condoms)	Non-Recyclable		
Household Hygiene	Public Health	Masks	Non-Recyclable	PPE	Y
Household Hygiene	Public Health	Gloves	Non-Recyclable	PPE	Y
Household Hygiene	Public Health	Wipes	Non-Recyclable	PPE	Y

Primary	Secondary	Tertiary	Recyclability	Functional Group	Count?
Household Hygiene	Liquid Product	Personal Care	Non-Recyclable		
Bulky Objects	White Goods	Large Appliances	Recyclable - Depot Drop-off		
Bulky Objects	Furniture	Mattresses, Box Springs	Recyclable - Depot Drop-off		
Bulky Objects	Furniture	Other Upholstered Furniture	Recyclable - Specialty		
Bulky Objects	Furniture	Other Furniture	Recyclable - Specialty		
Fines	Fines	Fines	Non-Recyclable		

Appendix B

Recyclability Categories Listing

Recyclability	Sorting Category
Green Bin	Paper Straws
	Other Compostable Paper
	Small Yard Waste
	Large Yard Waste
	Unavoidable Food Waste
	Plate Scrapings, Unfinished Meals
	Whole Fruits and Vegetables
	Whole Meats, Fish
	Full/Unused Ready-Made
	Baked Goods
	Dairy
	Liquids (drinks, oil in package)
	Candy and snacks
	Condiments and sauces
	Pet food
	Wood Utensils
Non-Recyclable	Waxed OCC
	Non-compostable, non-recyclable paper
	Garbage & Recycling Bags
	Other Rigid Beverage Container
	Durable Plastic Products
	Rigid Plastic Cups Labelled Compostable
	Plastic Takeout Containers Labelled Compostable
	Other Foodware Labelled Compostable
	#7 Bio Flexible - Plastic Bags Labelled Compostable
	#7 Bio Flexible - Bags and Liners
	Packaging, Bottles
	Pressure Treated Wood
	Finished Wood
	Finished Wood Furniture
	Other Rubber
	Leather
	Other Glass and Ceramics
	Other Inorganics
	Sharps
	Other Medical/Biological
	Cleaners, Soaps etc.
	Diapers
	Other (sanitary products, condoms)

Recyclability	Sorting Category
	Masks
	Gloves
	Wipes
	Personal Care
	Fines
Recyclable – Residential Collection	Junk Mail, Flyers, Unaddressed Mail
	Other Fine Office Paper or Envelopes
	Newsprint
	Clean Recyclable OCC
	Other Soiled OCC
	Cereal Boxes and Other Box Packaging
	Telephone Books
	Magazines
	Plastic-Lined Paper Hot Cups
	Plastic-Lined Paper Cold Cups
	Plastic-Lined Paper Cups Labelled Compostable
	Unlined Paper Takeout Containers
	Plastic-Lined Paper Takeout Containers
	Plastic-Lined Paper Takeout Containers, Bowls
	Paper bags
	Paper Party Décor
	Other Recyclable Paper
	Rigid Plastic Cups
	# 1 PETE – Bottles and Jars
	#1 PETE – Other Packaging
	#2 HDPE – Bottles and Jugs
	#2 HDPE – Tubs and Lids
	#4 LDPE
	#5 PP
	#6 PS – Non-Foam
	#6 PS – Packing Foam
	#7 Mixed Resin Plastic
	Uncoded Packaging/Containers
	Rigid Plastic takeout Containers
	Non-durable Plastic Food Containers
	Plastic Straws
	Plastic Utensils
	Food Containers
	Spiral-Wound Containers
	Food Containers

Recyclability	Sorting Category
	Food Containers
	Foil Trays, Wrap
	Other Non-Ferrous
Recyclable – Depot Drop-Off	Books
	Dairy or Dairy Substitute
	Non-Dairy/Deposit
	Re-Used HDPE & LDPE Plastic Bags
	Empty HDPE & LDPE Plastic Bags
	HDPE & LDPE Consumables Packaging Bags and Film
	Other Flexible Plastic Packaging (Multi-Layered and Other Flexible Resin)
	Freezer and Sandwich Bags
	Deposit Beverage Pouches
	Other Plastic Film
	Deposit Containers - Dairy or Dairy Substitute
	Deposit Containers – Water
	Deposit Containers – Other
	Foam Cups
	Foam Takeout Containers
	#6 PS – Foam Foodware
	#6 PS – Other PS Foam
	Other Foam
	Wood Pallets
	Unfinished Wood Furniture
	Other Wood
	Tires
	Other Ferrous
	Alcoholic
	Non-Alcoholic
	Household
	Light bulbs (Non-hazardous)
	Beer
	Other Alcohol
	Non-Alcoholic & Non-Dairy
	Dairy or Dairy Substitute
	Desktop Computers
	Notebook Computers
	Computer Peripherals
	Computer Monitors
	Printers, Scanners
	Televisions

Recyclability	Sorting Category
	Other Audio/Video
	Mobile Phones & Accessories
	Other Telephone and Communications
	Small Appliances & Floor Care Appliances
	Electronic Toys
	Smoke Detectors
	Other Electronics
	Lead Acid
	Household Batteries (Non Lithium-Ion)
	Lithium Ion Batteries
	Stains/Preservatives
	Latex Paint
	Oil-Based Paint
	Paint Aerosols
	Solvents
	Pesticides/Herbicides/Preservatives
	Motor Oil
	Oil Filters
	Antifreeze
	Thermostats and Switches
	CFLs
	Large Appliances
	Mattresses, Box Springs
Recyclable - Specialty	Clothing and accessories
	Household
	Reusable bags
	Other
	#3 PVC
	Coffee Pods
	Other/Mixed Plastics
	Manure, Slaughterhouse, Animals
	Natural Fiber Clothing
	Household
	Natural fiber bags
	Other
	Composite Organic Materials (Shoes)
	Other
	Machine Parts
	Construction/Industrial
	Food Containers

Recyclability	Sorting Category
	Gypsum/Drywall
	Masonry
	Rock, Sand, Dirt
	Rigid Asphalt
	Carpet
	Underlay
	Animal Carcass
	Pharmaceuticals
	Other Petroleum Based Products
	Other
	Other HHW or Containers
	Pet Waste
	Other Upholstered Furniture
	Other Furniture

Appendix C

Functional Categories Listing

Functional Category	Sorting Category
C&D	Wood Pallets
	Unfinished Wood Furniture
	Other Wood
	Pressure Treated Wood
	Finished Wood
	Finished Wood Furniture
	Gypsum/Drywall
	Masonry
	Rock, Sand, Dirt
	Rigid Asphalt
	Carpet
	Underlay
	Other Inorganics
Textiles	Clothing and accessories
	Household
	Reusable bags (washable), Reusable bags (non-washable)
	Other
	Natural Fiber Clothing
	Household
	Natural fiber bags
	Other Textiles
	Composite Organic Materials (Shoes)
	Other Non-compostable Organics
Single-Use Items	Plastic-Lined Paper Hot Cups
	Plastic-Lined Paper Cold Cups
	Plastic-Lined Paper Cups Labelled Compostable
	Unlined Paper Takeout Containers
	Plastic-Lined Paper Takeout Containers
	Plastic-Lined Paper Takeout Containers
	Paper bags
	Re-Used HDPE & LDPE Plastic Bags
	Empty HDPE & LDPE Plastic Bags
	Rigid Plastic Cups
	Foam Cups
	Foam Takeout Containers
	Rigid Plastic takeout Containers
	Plastic Straws
	Plastic Utensils
	Rigid Plastic Cups Labelled Compostable

Functional Category	Sorting Category
	Plastic Takeout Containers Labelled Compostable"
	Other Foodware Labelled Compostable
	#7 Bio Flexible - Plastic Bags Labelled Compostable
PPE	Masks
	Gloves
	Wipes

Appendix D

All Waste Composition by Sector

DILLON CONSULTING

Category	SF	MF	CI	SL	Combined (n=98)
01-Paper	**19%**	**18%**	**19%**	**5%**	**17%**
1-Junk Mail, Flyers, Unaddressed Mail	0.3%	0.3%	0.3%	0.1%	0.3%
2-Other Fine Office Paper or Envelopes	1.2%	1.4%	0.8%	0.5%	1.0%
3-Newsprint	0.2%	0.0%	0.1%	0.0%	0.1%
4-Clean Recyclable OCC	1.1%	1.3%	4.2%	2.2%	2.6%
5-Waxed OCC	0.0%	0.0%	1.3%	0.0%	0.6%
6-Other Soiled OCC	0.3%	0.4%	0.3%	0.0%	0.3%
7-Cereal Boxes and Other Box Packaging	2.3%	2.7%	1.5%	0.8%	1.9%
8-Telephone Books	0.0%	0.0%	0.1%	0.0%	0.0%
9-Magazines	0.1%	0.0%	0.2%	0.1%	0.1%
10-Books	0.2%	0.0%	0.3%	0.2%	0.2%
11-Dairy or Dairy Substitute	0.1%	0.2%	0.1%	0.0%	0.1%
12-Non-Dairy/Deposit	0.1%	0.1%	0.0%	0.0%	0.0%
13-Plastic-Lined Paper Hot Cups	0.3%	0.2%	0.9%	0.1%	0.5%
14-Plastic-Lined Paper Cold Cups	0.2%	0.1%	0.1%	0.0%	0.1%
15-Plastic-Lined Paper Cups Labelled Compostable	0.0%	0.0%	0.0%	0.0%	0.0%
16-Paper Straws	0.1%	0.0%	0.0%	0.0%	0.0%
17-Unlined Paper Takeout Containers	0.2%	0.2%	0.3%	0.0%	0.2%
18-Plastic-Lined Paper Takeout Containers	0.4%	0.6%	0.3%	0.0%	0.4%
19-Plastic-Lined Paper Takeout Containers	0.2%	0.2%	0.2%	0.0%	0.2%
20-Paper bags	1.0%	1.3%	0.7%	0.1%	0.8%
21-Paper Party Décor	0.0%	0.0%	0.0%	0.0%	0.0%
22-Other Recyclable Paper	0.4%	0.9%	0.4%	0.1%	0.5%
23-Other Compostable Paper	8.4%	6.8%	4.7%	0.7%	5.4%
24-Non-compostable, non-recyclable paper	1.7%	1.1%	2.2%	0.4%	1.6%
02-Plastic	**24%**	**22%**	**19%**	**12%**	**19%**
025 - Re-Used HDPE & LDPE Plastic Bags	0.1%	0.1%	0.0%	0.0%	0.1%
026 - Empty HDPE & LDPE Plastic Bags	0.1%	0.1%	0.0%	0.0%	0.0%
027 - HDPE & LDPE Consumables Packaging Bags and Film	3.3%	2.2%	3.4%	0.6%	2.7%
028 - Other Flexible Plastic Packaging (Multi-Layered and Other Flexible Resin)	2.7%	1.8%	0.9%	0.4%	1.4%
029 - Garbage & Recycling Bags	1.5%	1.4%	1.4%	0.3%	1.3%
030 - Freezer and Sandwich Bags	0.5%	0.3%	0.1%	0.0%	0.2%
031 - Deposit Beverage Pouches	0.1%	0.0%	0.0%	0.0%	0.0%
032 - Other Plastic Film	0.7%	0.2%	0.7%	0.9%	0.6%
033 - Clothing and accessories	0.9%	2.3%	0.2%	0.3%	0.9%
034 - Household	1.7%	1.5%	0.7%	1.4%	1.2%
035 - Reusable bags	0.2%	0.2%	0.1%	0.0%	0.1%
036 - Other	2.8%	1.9%	1.5%	1.7%	1.9%

Category	SF	MF	CI	SL	Combined (n=98)
037 - Deposit Containers - Dairy or Dairy Substitute	0.3%	0.2%	0.1%	0.0%	0.1%
038 - Deposit Containers – Water	0.0%	0.1%	0.2%	0.0%	0.1%
039 - Deposit Containers – Other	0.2%	0.4%	0.1%	0.0%	0.2%
040 - Rigid Plastic Cups	0.3%	0.2%	0.2%	0.0%	0.2%
041 - Other	0.0%	0.0%	0.0%	0.0%	0.0%
042 - # 1 PETE – Bottles and Jars	0.3%	0.4%	0.1%	0.1%	0.2%
043 - #1 PETE – Other Packaging	0.7%	0.8%	0.3%	0.0%	0.5%
044 - #2 HDPE – Bottles and Jugs	0.3%	0.5%	0.3%	0.0%	0.3%
045 - #2 HDPE – Tubs and Lids	0.1%	0.1%	0.2%	0.0%	0.1%
046 - #3 PVC	0.0%	0.0%	0.0%	0.0%	0.0%
047 - #4 LDPE	0.0%	0.0%	0.0%	0.0%	0.0%
048 - #5 PP	0.6%	0.6%	0.4%	0.1%	0.4%
049 - #6 PS – Non-Foam	0.1%	0.1%	0.1%	0.0%	0.1%
050 - #6 PS – Packing Foam	0.1%	0.2%	0.2%	0.1%	0.1%
051 - Foam Cups	0.0%	0.0%	0.0%	0.0%	0.0%
052 - Foam Takeout Containers	0.0%	0.0%	0.0%	0.0%	0.0%
053 - #6 PS – Foam foodware	0.3%	0.2%	0.1%	0.0%	0.1%
054 - #6 PS – Other PS Foam	0.1%	0.1%	0.4%	0.0%	0.2%
055 - Other Foam	0.4%	0.1%	0.1%	0.0%	0.1%
056 - #7 Mixed Resin Plastic	0.0%	0.0%	0.0%	0.0%	0.0%
057 - Uncoded Packaging/Containers	0.7%	0.7%	0.3%	0.1%	0.5%
058 - Rigid Plastic takeout Containers	0.5%	0.9%	0.4%	0.1%	0.5%
059 - Non-durable Plastic Food Containers	0.0%	0.0%	0.0%	0.0%	0.0%
060 - Durable Plastic Products	2.8%	2.9%	6.1%	5.3%	4.5%
061 - Plastic Straws	0.0%	0.0%	0.0%	0.0%	0.0%
062 - Plastic Utensils	0.1%	0.1%	0.1%	0.0%	0.1%
063 - Coffee Pods	0.7%	0.5%	0.1%	0.0%	0.3%
064 - Other/Mixed Plastics	0.1%	0.0%	0.2%	0.0%	0.1%
174 - Other Uncoded	0.0%	0.1%	0.0%	0.0%	0.0%
03-Plastic Labelled Compostable	**0.1%**	**0%**	**0%**	**0.1%**	**0.1%**
065 - Rigid Plastic Cups Labelled Compostable	0.0%	0.0%	0.0%	0.0%	0.0%
"066 - Plastic Takeout Containers Labelled Compostable"	0.0%	0.0%	0.0%	0.0%	0.0%
067 - Other Foodware Labelled Compostable	0.0%	0.0%	0.0%	0.0%	0.0%
068 - #7 Bio Flexible - Plastic Bags Labelled Compostable	0.0%	0.0%	0.0%	0.0%	0.0%
069 - #7 Bio Flexible - Bags and Liners	0.0%	0.0%	0.1%	0.0%	0.0%
04-Compostable Organics	**24%**	**28%**	**22%**	**6%**	**22%**
071 - Small Yard Waste	1.1%	0.8%	0.3%	0.1%	0.5%

Category	SF	MF	CI	SL	Combined (n=98)
072 - Large Yard Waste	1.0%	0.0%	0.1%	0.0%	0.2%
073 - Unavoidable Food Waste	8.5%	11.4%	5.9%	1.1%	7.3%
074 - Plate Scrapings, Unfinished Meals	3.6%	4.8%	3.1%	0.3%	3.3%
075 - Whole Fruits and Vegetables	2.2%	3.5%	1.6%	0.1%	2.1%
076 - Whole Meats, Fish	1.1%	1.1%	0.8%	0.1%	0.9%
077 - Full/Unused Ready-Made	0.7%	0.5%	0.2%	0.5%	0.4%
078 - Baked Goods	1.5%	1.7%	0.7%	0.2%	1.0%
079 - Dairy	0.9%	0.9%	0.2%	0.0%	0.5%
080 - Liquids (drinks, oil in package)	0.5%	1.0%	0.8%	0.0%	0.7%
081 - Candy and snacks	1.2%	1.1%	0.3%	0.3%	0.7%
082 - Condiments and sauces	0.8%	1.3%	0.4%	0.2%	0.7%
083 - Pet food	0.5%	0.0%	0.1%	0.2%	0.1%
084 - Wood Pallets	0.0%	0.0%	1.8%	0.5%	0.8%
085 - Unfinished Wood Furniture	0.0%	0.0%	0.6%	0.1%	0.3%
086 - Wood Utensils	0.1%	0.1%	0.3%	0.0%	0.2%
087 - Other Wood	0.1%	0.1%	5.3%	2.7%	2.6%
088 - Manure, Slaughterhouse, Animals	0.0%	0.0%	0.0%	0.0%	0.0%
05-Non-Compostable Organics	**7%**	**6%**	**18%**	**39%**	**15%**
089 - Pressure Treated Wood	0.2%	0.1%	8.9%	4.5%	4.4%
090 - Finished Wood	2.4%	1.1%	6.2%	25.3%	6.6%
091 - Finished Wood Furniture	0.0%	0.0%	0.9%	7.4%	1.3%
092 - Natural Fiber Clothing	0.9%	1.8%	0.3%	0.2%	0.8%
093 - Household	0.7%	1.5%	0.2%	0.1%	0.6%
094 - Reusable bags	0.9%	0.1%	0.0%	0.0%	0.2%
095 - Other	0.3%	0.1%	0.0%	0.2%	0.1%
096 - Tires	0.1%	0.0%	0.0%	0.0%	0.0%
097 - Other Rubber	0.3%	0.1%	0.1%	0.4%	0.2%
098 - Leather	0.1%	0.3%	0.0%	0.0%	0.1%
99 - Composite Organic Materials (shoes)	1.0%	0.6%	0.2%	0.4%	0.5%
100 - Other	0.1%	0.1%	0.8%	0.1%	0.4%
06-Metal	3%	4%	3%	3%	3%
101 - Food Containers	0.4%	0.6%	0.4%	0.1%	0.4%
102 - Spiral-Wound Containers	0.1%	0.0%	0.0%	0.0%	0.0%
103 - Other Ferrous	0.0%	0.0%	0.0%	0.0%	0.0%
104 - Food Containers	0.0%	0.1%	0.0%	0.0%	0.0%
105 - Alcoholic	0.1%	0.2%	0.1%	0.0%	0.1%
106 - Non-Alcoholic	0.1%	0.3%	0.1%	0.0%	0.2%
107 - Food Containers	0.0%	0.1%	0.0%	0.0%	0.0%
108 - Foil Trays, Wrap	0.5%	0.5%	0.2%	0.0%	0.3%

Category	SF	MF	CI	SL	Combined (n=98)
109 - Other Non-Ferrous	0.1%	0.0%	0.0%	0.0%	0.0%
110 - Household	1.3%	1.3%	1.1%	1.1%	1.2%
111 - Machine Parts	0.0%	0.0%	0.1%	0.1%	0.1%
112 - Construction/Industrial	0.2%	0.3%	1.3%	2.0%	0.9%
07-Glass	**2%**	**4%**	**3%**	**6%**	**4%**
113 - Beer	0.0%	0.2%	0.0%	0.0%	0.1%
114 - Other Alcohol	0.2%	0.6%	0.3%	0.0%	0.3%
115 - Non-Alcoholic & Non-Dairy	0.0%	0.4%	0.2%	0.0%	0.2%
116 - Dairy or Dairy Substitute	0.0%	0.0%	0.0%	0.0%	0.0%
117 - Food Containers	0.2%	1.0%	0.2%	0.1%	0.4%
118 - Other Glass and Ceramics	1.4%	2.0%	2.3%	6.0%	2.6%
119 - Light bulbs (Non-hazardous)	0.1%	0.0%	0.0%	0.0%	0.0%
08-Building Material	**2%**	**2%**	**6%**	**10%**	**5%**
120 - Gypsum/Drywall	1.0%	0.4%	0.0%	0.1%	0.3%
121 - Masonry	0.0%	0.0%	0.1%	0.0%	0.0%
122 - Rock, Sand, Dirt	0.2%	1.0%	1.4%	0.6%	1.0%
123 - Rigid Asphalt	0.0%	0.0%	0.0%	0.0%	0.0%
124 - Carpet	0.2%	0.0%	1.1%	1.3%	0.7%
125 - Underlay	0.0%	0.0%	0.5%	1.3%	0.4%
126 - Other Inorganics	0.4%	0.3%	2.6%	6.1%	2.1%
09-Electronic Waste	**2%**	**2%**	**1%**	**1%**	**1%**
127 - Desktop Computers	0.0%	0.0%	0.0%	0.0%	0.0%
128 - Notebook Computers	0.0%	0.1%	0.1%	0.0%	0.1%
129 - Computer Peripherals	0.0%	0.1%	0.0%	0.0%	0.0%
130 - Computer Monitors	0.0%	0.0%	0.0%	0.0%	0.0%
131 - Printers, Scanners	0.0%	0.0%	0.0%	0.0%	0.0%
132 - Televisions	0.0%	0.0%	0.0%	0.0%	0.0%
133 - Other Audio/Video	0.0%	0.0%	0.1%	0.0%	0.0%
134 - Mobile Phones & Accessories	0.0%	0.0%	0.0%	0.0%	0.0%
135 - Other	0.0%	0.1%	0.0%	0.1%	0.1%
136 - Small Appliances & Floor Care Appliances	0.7%	0.2%	0.1%	0.2%	0.2%
137 - Electronic Toys	0.0%	0.2%	0.0%	0.2%	0.1%
138 - Smoke Detectors	0.0%	0.0%	0.0%	0.0%	0.0%
139 - Other Electronics	0.9%	1.1%	0.3%	0.6%	0.7%
10-Household Hazardous	**1%**	**1%**	**2%**	**5%**	**2%**
140 - Lead Acid	0.0%	0.0%	0.0%	0.0%	0.0%
141 - Household Batteries (Non Lithium-Ion)	0.1%	0.1%	0.0%	0.1%	0.1%
142 - Lithium Ion Batteries	0.0%	0.0%	0.0%	0.0%	0.0%
143 - Sharps	0.0%	0.0%	0.0%	0.0%	0.0%

Category	SF	MF	CI	SL	Combined (n=98)
144 - Animal Carcass	0.1%	0.0%	0.0%	0.0%	0.0%
145 - Other	0.2%	0.0%	0.5%	4.4%	0.8%
146 - Stains/Preservatives	0.1%	0.0%	0.0%	0.1%	0.0%
147 - Latex Paint	0.0%	0.0%	0.2%	0.0%	0.1%
148 - Oil-Based Paint	0.3%	0.0%	0.0%	0.0%	0.1%
149 - Paint Aerosols	0.0%	0.0%	0.0%	0.0%	0.0%
150 - Solvents	0.0%	0.0%	0.6%	0.0%	0.3%
151 - Cleaners, Soaps etc.	0.1%	0.1%	0.1%	0.1%	0.1%
152 - Pesticides/Herbicides/Preservatives	0.0%	0.0%	0.0%	0.0%	0.0%
153 - Motor Oil	0.0%	0.0%	0.0%	0.0%	0.0%
154 - Oil Filters	0.0%	0.0%	0.0%	0.0%	0.0%
155 - Antifreeze	0.0%	0.0%	0.0%	0.0%	0.0%
156 - Pharmaceuticals	0.2%	0.2%	0.2%	0.0%	0.2%
157 - Other Petroleum Based Products	0.1%	0.0%	0.1%	0.0%	0.1%
158 - Other	0.2%	0.0%	0.1%	0.0%	0.1%
159 - Thermostats and Switches	0.0%	0.0%	0.0%	0.0%	0.0%
160 - CFLs	0.0%	0.0%	0.0%	0.0%	0.0%
161 - Other HHW or Containers	0.0%	0.0%	0.0%	0.0%	0.0%
11-Household Hygiene	**15%**	**14%**	**5%**	**0.2%**	**8%**
162 - Diapers	8.0%	5.5%	0.5%	0.0%	3.1%
163 - Pet Waste	4.4%	5.6%	3.0%	0.0%	3.6%
164 - Other (sanitary products, condoms)	1.5%	1.2%	0.2%	0.0%	0.7%
165 - Masks	0.1%	0.0%	0.0%	0.0%	0.0%
166 - Gloves	0.4%	0.1%	0.6%	0.1%	0.4%
167 - Wipes	0.3%	0.4%	0.2%	0.0%	0.2%
168 - Personal Care	0.4%	0.7%	0.3%	0.0%	0.4%
12-Bulky Objects	**0%**	**0%**	**1%**	**11%**	**2%**
169 - Large Appliances	0.0%	0.0%	0.0%	0.0%	0.0%
170 - Mattresses, Box Springs	0.0%	0.0%	0.0%	0.6%	0.1%
171 - Other Upholstered Furniture	0.0%	0.0%	1.0%	9.3%	1.6%
172 - Other Furniture	0.0%	0.0%	0.0%	1.3%	0.2%
13-Fines	**2%**	**1%**	**1%**	**2%**	**1%**
173-Fines	2.1%	1.2%	1.4%	1.5%	1.5%
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Appendix E

Selected Site Photos

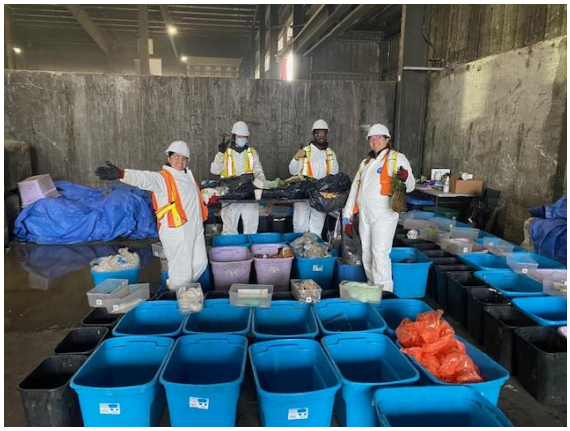


Photo 1: Sorting area at North Surrey Recycling and Waste Centre.

Photo 2: Sorting area at United Boulevard Recycling and Waste Centre.

Photo 3: Sorting area at South Vancouver Transfer Station.

Photo 4: Example of received material before collecting the sample.

Photo 5: The sample after being weighed in at United Boulevard Recycling and Waste Center.

Photo 6: Staff sorting a sample at United Boulevard Recycling and Waste Centre.

Photo 7: Sample sorted into categories by staff.

Photo 8: Staff counting single use items.

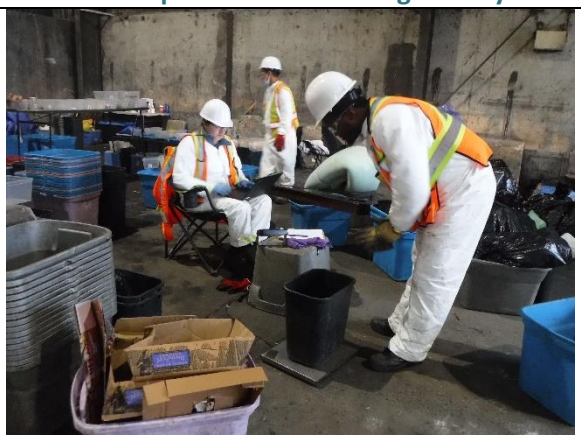


Photo 9: Staff weighing out a sample at North Surrey Recycling and Waste Center.

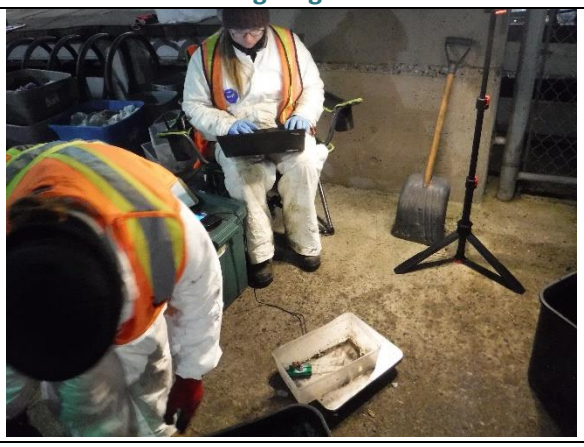


Photo 10: Staff weighing out a sample at South Vancouver Transfer Station.

Photo 11: Waxed OCC.

Photo 12: Magazines, and Books.

Photo 13: Paper Bags.

Photo 14: Deposit Containers- Dairy or dairy substitute, Water, Other. In the bottom right is #6- Foam Foodware.

Photo 15: HDPE & LDPE Consumables Packaging Bags and Film, and Other Flexible Plastic Packaging (Multi-Layered and other flexible resin).

Photo 16: Other Uncoded Plastic.

Photo 17: Whole Fruits and Vegetables.

Photo 18: Condiments and Sauces, Dairy, Whole Fruits and Vegetables, and Baked Goods.

Photo 19: Other Non-Compostable Organics.

Photo 20: Other Glass and Ceramics.

Photo 21: Other Clean Wood, Finished Wood, and Other Inorganic Building Material.

Photo 22: Household Textiles (Synthetic), Other Textiles (Synthetic), and Composite Organic Materials (shoes).