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**Date:** October 27, 2020  
**c:**  
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**File:** 704-SWM.PLAN03159-01  


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**Subject:** District of Squamish 2020 Waste Audit

## 1.0 INTRODUCTION

Tetra Tech Canada Inc. (Tetra Tech) was retained by the District of Squamish (District) to conduct a waste composition study at the Squamish Landfill (the Landfill) to characterize the waste streams from the various sectors. The purpose of this study was to:

1. Quantify and characterize the materials present in the multi-sector waste disposal streams received at the Landfill;
2. Monitor the progress of the District's Waste Diversion Targets and Zero Waste Strategy;
3. Establish a baseline for Single-Use Items (SUI) in the waste stream, and
4. Compare the 2020 waste composition results with 2016 and 2018 results.

The waste sampling and sorting was conducted from August 17 to August 22, 2020 (Monday to Saturday) at the Landfill.

A sampling plan was developed in conjunction with the District to characterize the waste from single family residential (SF), multi-family residential (MF), industrial, commercial, and institutional (ICI), construction and demolition (C&D), and streetscape (STR) sectors. The total number of samples that was analyzed by sector is summarized in Table 1-1.

**Table 1-1: Number of Samples Characterized by Sector**

Sector	Number of Samples
Single Family Residential (SF)	8
Multi-Family Residential (MF)	6
Industrial, Commercial, and Institutional (ICI)	6
Construction and Demolition (C&D)	6
Streetscape (STR)	4
<b>Total</b>	<b>30</b>

In addition to the sampling plan above, the samples were also characterized for extended producer responsibility (EPR) materials. This aspect of the study was funded by the Stewardship Agencies of British Columbia (SABC).

## 1.1 Background



**Photo 1-1: Waste Samples being Collected at the Landfill Working Face**

The District launched a Zero Waste Strategy in 2016. This was developed to support the community's commitment to environmental sustainability and preserving landfill capacity. The goal of the strategy is to reduce the District's waste disposal rate to 350 kg/capita/year by 2020 and 150 kg/capita/year by 2040. In 2019, the District's annual disposal rate was 559 kg per capita. The 2020 waste composition audit was undertaken to understand disposal habits and behaviours of each sector and to monitor how waste diversion programs are progressing towards the District's 2020 goal.

## 2.0 METHODOLOGY

This section discusses the process for undertaking this study, provides an overview of how waste was collected and characterized, and outlines the key factors and considerations for the study. Tetra Tech's sampling methodology is based on the Canadian Council of Ministers of the Environment's (CCME) *Recommended Waste Characterization Methodology for Direct Waste Analysis Studies in Canada*.

The waste characterization study was performed with an on-site supervisor and three environmental technicians who were trained on safety and material sorting procedures prior to the fieldwork. Personal protective equipment was used by staff according to the specifications of Tetra Tech's Health and Safety Plan, which factored in special requirements for working at the Landfill. Safety meetings were conducted daily to emphasize key concerns including how to handle material hazards such as sharps or hazardous materials, safe lifting practices, working around large industrial vehicles, and weather conditions.



**Photo 2-1: Waste sorting set up at the Landfill.**

### 2.1 Load Identification and Sample Selection

Sampling and sorting were conducted in accordance with the sampling plan discussed with the District.

Tetra Tech's field supervisor worked directly with the District's landfill operations contractor (GFL Environmental) to identify loads for sampling. Collection trucks that would be sampled would tip their load next to the active face of the Landfill. For all waste sectors except C&D, the Tetra Tech supervisor would select a random location in the load to extract one scoop (typically 300 kg to 500 kg of waste) of material to be audited.

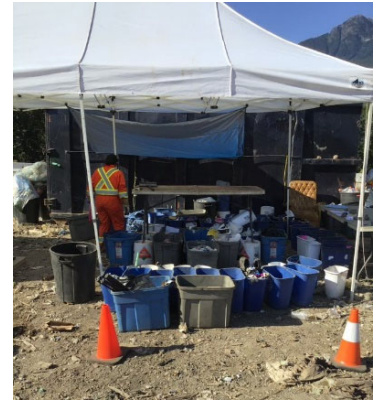
For ICI and MF loads, the loader operator would be instructed to extract two scoops (one at the front and one at the back of the load) which would then be audited as two separate samples. MF and ICI loads were confirmed both with the scale house attendant and with GFL Environmental staff post audit.

From each scoop, Tetra Tech staff would collect approximately 100 kg of waste and this amount would be considered to be one sample.

## 2.2 Sample Sorting and Analysis

### 2.2.1 Hand Sorting

A random sample of 100 kg would be sorted by hand into 12 primary categories, which were then further sorted into 48 secondary material subcategories. The categories were approved by the District for optimal comparability with past waste composition studies. The primary categories were (1) paper, (2) plastic, (3) metal, (4) glass, (5) organics, (6) building materials, (7) electronic waste, (8) household hazardous waste, (9) household hygiene, (10) bulky objects, (11) textiles, and (12) fines. A complete list of the categories along with their descriptions is included in Appendix A. Once the samples are sorted, each category bin would be weighed and entered into Tetra Tech's waste composition spreadsheet tool.



**Photo 2-2: Hand Sorting Station.**

### 2.2.2 Visual Auditing

C&D samples were visually audited. The C&D materials categories are generally the same as hand sorted materials but included six additional secondary material categories within the building materials category (i.e., (1) gypsum/drywall plaster, (2) masonry, (3) rocks/sand/dirt/ceramic/porcelain, (4) rigid asphalt products, (5) carpet waste and underlay, and (6) other inorganics). Two staff members would walk around the C&D load to visually estimate composition by volume first by primary categories and then secondary categories. Staff would record their estimates individually, then compared their results so that an average can be determined. The average results would then be recorded on a data form.

### 2.2.3 Extended Producer Responsibility Sorting

After each hand sort, waste materials would be re-sorted into 172 EPR categories. These re-sorted categories were then weighed and recorded on a data form for EPR materials. A list of EPR categories is included in Appendix C.

## 2.3 Data Analysis

Data analysis was performed using Tetra Tech's waste composition spreadsheet tool. Data was compiled into primary and secondary categories by weight. For visual audits, standard densities of waste materials were used to convert volume estimates to weight estimates. All results are presented on a weight basis. The weighted average composition for each sector was calculated for each material category. The overall composition was calculated by extrapolating the weighted average composition by sector to estimated tonnages of waste by sector. Data was also compared with results from the 2016 and 2018 waste audits at the primary material category level for each sector. Data was then compiled and analyzed further to calculate the overall diversion potential of each sector.

## 2.4 Health and Safety

A Health and Safety Plan was prepared for this project to identify potential hazards in advance of the waste composition study field work. Tetra Tech staff conducting field work were required to have up-to-date safety certifications and training for waste sorting activities. Upon arrival at the Landfill to initiate the field work, Tetra Tech

staff conducted a site safety orientation with the operator to identify site-specific hazards and controls. A safe working location was selected and clearly demarcated. A safety meeting was also conducted at the beginning of each sorting day to remind staff of hazards from the previous day and identify new hazards and controls as applicable.

## 2.4.1 COVID-19 Considerations

Tetra Tech staff adhered to strict COVID-19 protocols during the field work at the Landfill. This included wearing both face masks and face shields when social distancing was not possible, such as at the waste sorting table. High touch surfaces such as the field laptop and the field camera were disinfected routinely throughout each field day and no samples were avoided due to potential COVID-19 concerns.

## 2.4.2 Weather Considerations

Air temperatures at the sorting location ranged from 20°C to 30°C throughout the sampling week. Due to the prolonged heat and sun exposure, the following actions were undertaken to reduce the risk of heat-related safety issues:

- Whenever possible, the field team started working on site early in the morning (7:30 a.m.) to complete as much work as possible before temperatures rose; and
- Staff members were monitored closely for signs of heat-related illnesses and took regular water breaks in hot temperatures to manage hydration and body temperature levels.

Rain and wind became problematic towards the end of the sampling week. Tetra Tech worked with the landfill staff to mitigate these effects. Some actions included the following:

- Working inside the 40-yard container that was provided to secure the field canopy and provide protection from the elements;
- Weighing down all canopies and field tables with dumbbell weights and rocks; and
- Covering all samples directly following the initial weighing to minimize water infiltration.



**Photo 2-3: Photo shows the Changing Weather Conditions and Actions to Improve Working Conditions at the Sorting Location.**

## 3.0 WASTE CHARACTERIZATION RESULTS

The following summarizes the waste composition results for the various sectors that were sampled. Waste composition results for all material categories are presented in Appendix D. Selected photographs of the samples are included in Appendix E.

Results are presented by primary category and weight-based percentages. Primary category percentages were calculated by aggregating all sample data for each sector. An average percentage by weight was determined for each material type. For samples where visual estimates were conducted, the volume-based percentages were converted into weight-based percentages (see Appendix B for specific density for each material category).

For each sample, the amount of SUIs were weighed and counted by individual piece. This was helpful in estimating the density of each single-use category.

Diversion potential of material in the waste stream were categorized as either curbside recyclable (acceptable in the blue bin), curbside compostable (acceptable in the green bin), depot/drop-off (divertible by dropping off at a depot, donation or transfer facility), co-gen (materials dropped off at that landfill that can potentially be used as a fuel at a biomass energy facility for co-generation) and residual (landfilled). Classifications for what can be diverted through recycling or composting can be found in Appendix A. The diversion potential is calculated based on an ideal scenario where residents and/or businesses achieved 100% efficiency of their diversion options (green bins, blue bins, depot options). This is the theoretical maximum and represents the upper boundary of what is possible given the current waste composition. This is a hypothetical analysis and does not consider different diversion potentials for specific materials from different sectors.

### 3.1 Single Family Residential

The following presents the Single Family (SF) residential results. Eight SF collection truck loads were sampled and sorted by hand.

#### 3.1.1 Waste Composition Results

Figure 3-1 represents the weighted average of primary categories from the single family residential samples. The largest components were organics (24.3%), plastics (20.7%), paper (16.6%), household hygiene (12.6%), and textiles (6.3%).

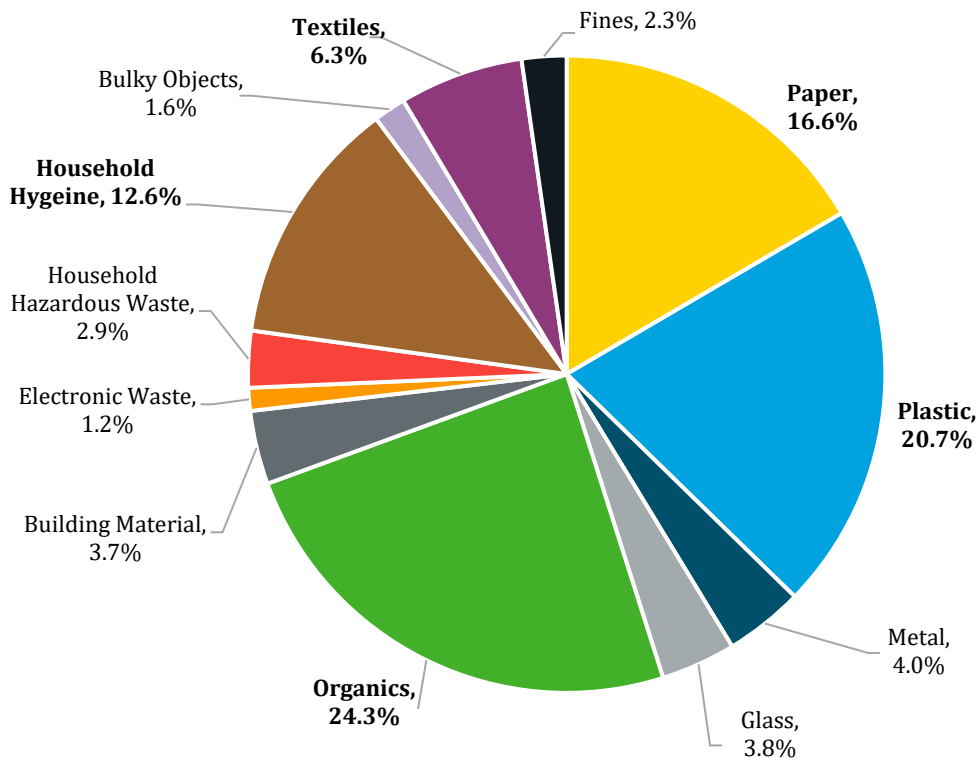


Figure 3-1: Single Family Residential Waste Composition

Organics largely consisted of food waste, including avoidable food waste (10.3%) and unavoidable food waste (8.5%). Definitions of categories are included in Appendix A.

For plastics, the largest components were flex packaging (5.5%), film products (4.8%), rigid packaging (3.0%), durable products (2.8%), and film packaging (1.4%).

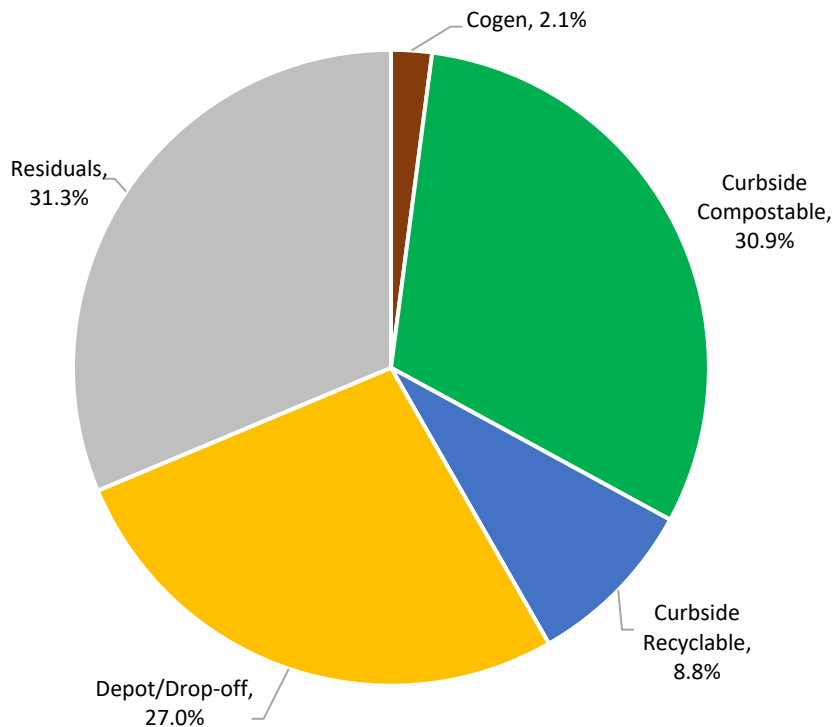
Paper products comprised mainly of compostable paper (10.3%), followed by recyclable paper (3.5%). Recycled paper typically consisted of cardboard and fine office paper in the SF samples.

Household hygiene (12.6%) was predominantly made up of diapers and pet waste.

### 3.1.2 Diversion Potential

The diversion potential for the SF waste stream is presented on Figure 3-2. This represents materials that could be diverted from disposal using the District’s existing programs. Approximately 68.7% of the waste could theoretically be diverted. 30.9% of the waste stream (i.e., Curbside Compostable) could be diverted using the District’s existing curbside organics collection program. Materials that could go to Depot/Drop-off make up 27.0% of the waste stream and another 8.8% could be diverted through the curbside recycling program.

As portrayed in the results below, the diversion potential for curbside compostable materials can be higher than the percentage of organics in the waste composition results because curbside compostables also include compostable paper in the waste stream which represents 10.3% in the paper primary category.



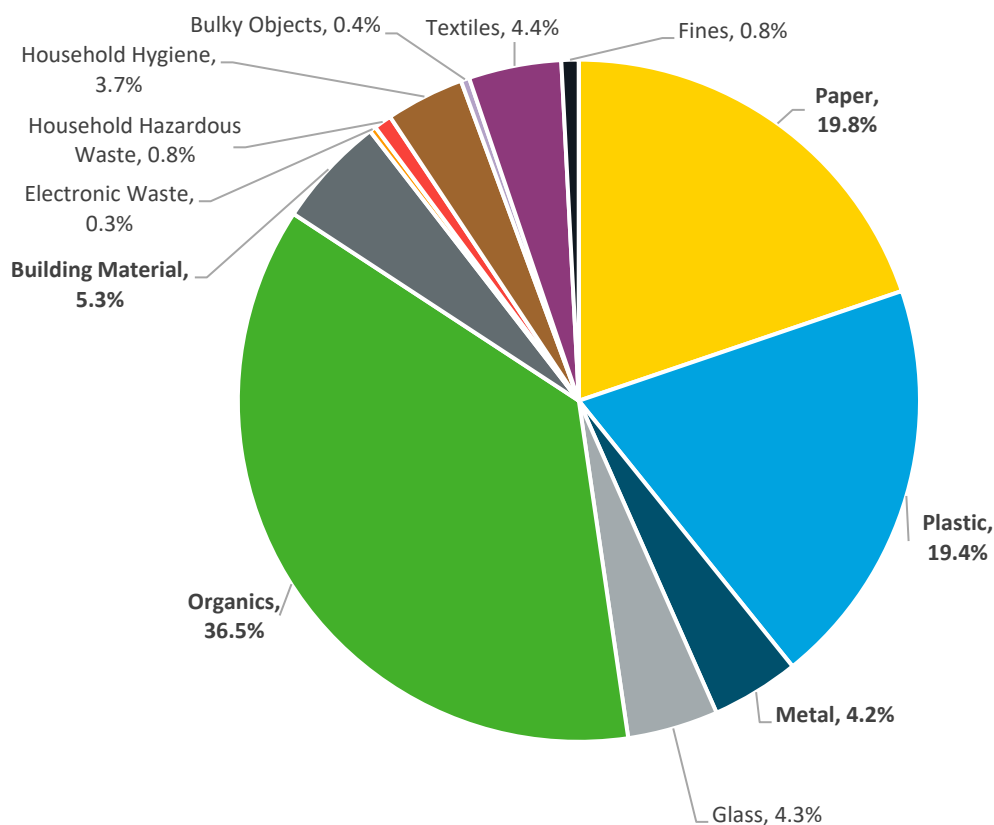
**Figure 3-2: Diversion Potential of Landfilled Material from the SF Residential Sector**

## 3.2 Multi-Family Residential

The following section represents the waste composition results from the Multi-Family (MF) residential waste stream. In the District, the MF and ICI waste streams are collected together on the same route. The collection contractor estimates that the MF waste stream makes up approximately 17% of the annual MF/ICI materials collected based on August 2020 collection data. Three suspected MF truckloads were sampled, with two samples collected from each truck (i.e., a sample from the front of the load and a sample from the back of the load).

### 3.2.1 Waste Composition Results

Figure 3-3 represents the weighted average of primary categories for the MF samples. The largest components of this stream were organics (36.5%), paper (19.8%), plastic (19.4%), building materials (5.3%), textiles (4.4%), glass (4.3%), and metal (4.2%).



**Figure 3-3: Multi-Family Residential Waste Composition**

Organics were made up mostly of avoidable food waste (16.6%), co-gen wood (10.3%), unavoidable food waste (5.5%), and yard waste (1.6%).

For paper, the main categories were compostable paper (7.4%), recyclable paper (7.2%), and other/non-Recycle BC paper (3.0%). In MF samples, some common examples of recyclable paper included boxboard, cardboard, newsprint, and fine office paper.

Plastics were largely comprised of film products (6.3%), durable products (3.9%), flex packaging (2.4%), rigid packaging (1.9%), and film packaging (1.7%).

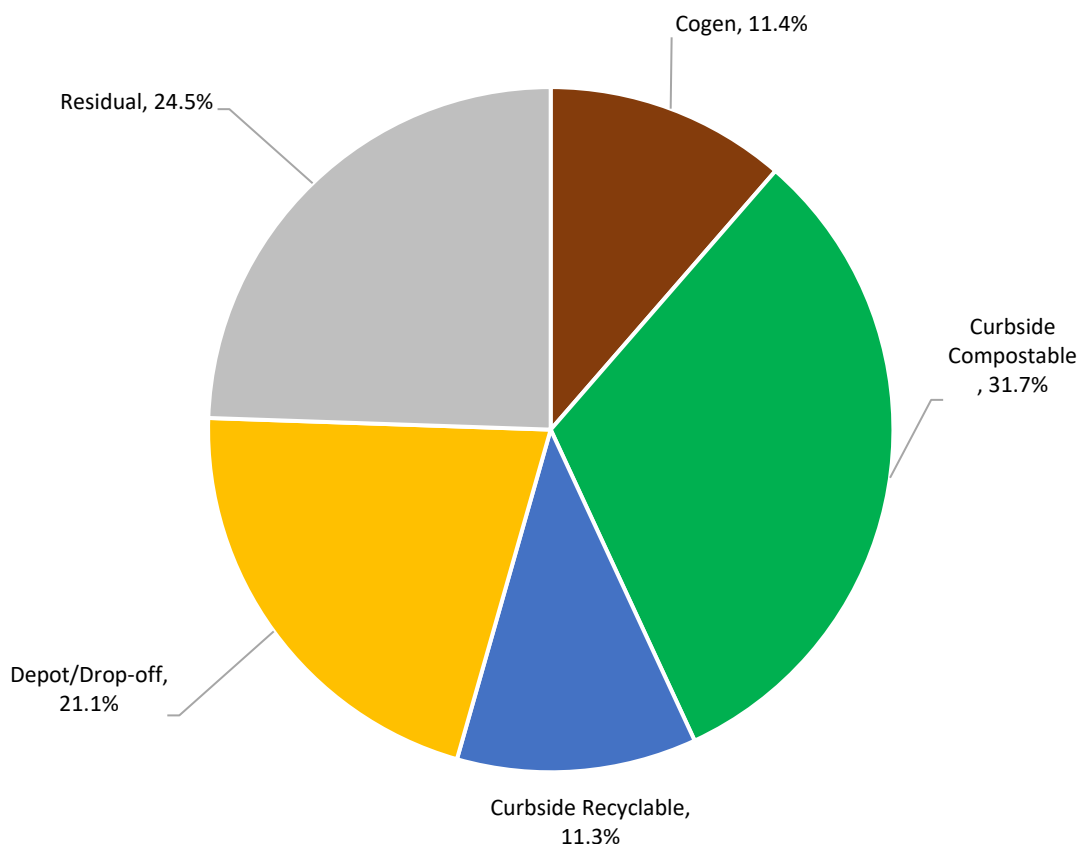
Glass was made up of refundable glass (2.4%), non-Recycle BC glass (1.0%), and recyclable glass (0.9%).

Metal was predominantly made up of non-Recycle BC metal (2.6%).

The composition of household hygiene (3.7%) in the 2020 MF stream was considerably less than in 2018 (19.2%) and this speaks to the overall variability of waste composition data especially with small sample sets. It is important to recognize that waste composition audits provide a snapshot of the waste stream during each sampling period and variances in composition can be decreased with more samples that also take into consideration seasonality.

### 3.2.2 Diversion Potential

The diversion potential for the MF waste stream is presented on Figure 3-4. Approximately 75.5% of the waste could theoretically be diverted from the landfill. 31.7% of the waste stream is considered Curbside Compostable and could be diverted through an organics collection program. Following curbside compostable, Depot/Drop-off (21.1%) was the next largest segment of the waste stream that could be diverted. 11.4% could be used for co-generation and 11.3% of the materials could be diverted through recycling programs.



**Figure 3-4: Diversion Potential of Landfilled Material from the MF Sector**

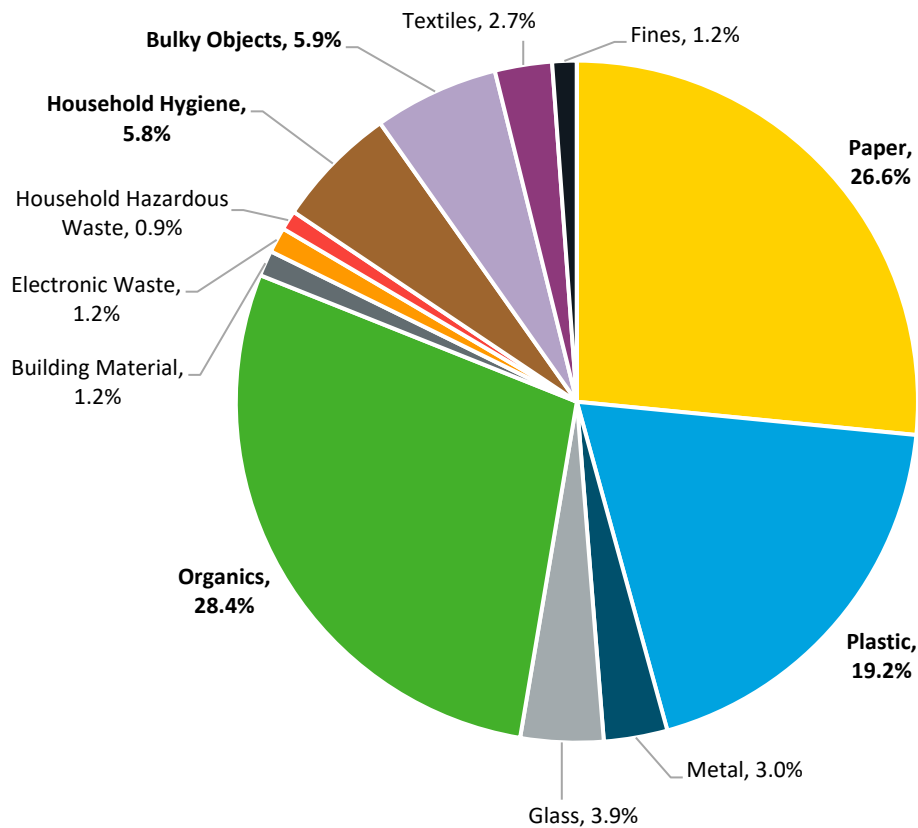


### 3.3 Industrial, Commercial, and Institutional

The following summarizes the ICI sector results. Three ICI sector truck loads were audited and two samples were collected from each truck.

#### 3.3.1 Waste Composition Results

Figure 3-5 illustrates the waste composition of the ICI waste stream. Organics (28.4%) formed the largest percentage of the sampled ICI waste. Paper (26.6%), plastic (19.2%), bulky objects (5.9%) and household hygiene (5.8%) also form significant percentages of the sampled ICI waste.



**Figure 3-5: ICI Waste Composition**

ICI organics were largely comprised of food waste, with avoidable food waste (15.2%) and unavoidable food waste (8.1%). This was followed by landfill wood (2.7%) and yard waste (1.3%).

The bulk of the paper category was made up of compostable paper (15.9%), recyclable paper (5.8%), single-use poly coat cups (1.6%), and other/non-Recycle BC paper (1.5%). Recyclable paper was largely comprised of office paper and cardboard in the ICI stream.

Plastics consisted mostly of flex packaging (4.0%), film products (4.0%), rigid packaging (3.0%), durable products (1.9%), film packaging (1.7%), and styrofoam (0.9%).

A common bulky object (5.9%) identified in the ICI waste stream were foldable camping chairs.

Items frequently observed in the household hygiene category were diapers and pet waste in the ICI waste stream.

### 3.3.2 Diversion Potential

The diversion potential from the ICI waste stream is presented on Figure 3-6. Approximately 79.0% of the waste could theoretically be diverted from the landfill. Curbside Compostable materials consist of 41.4% of the waste stream and could be diverted through an organics collection program. Following curbside compostable, Depot/Drop-off (22.6%) was the next largest segment of the waste stream that could be diverted. Materials that could be diverted through recycling programs represents 14.4% of the ICI waste stream.

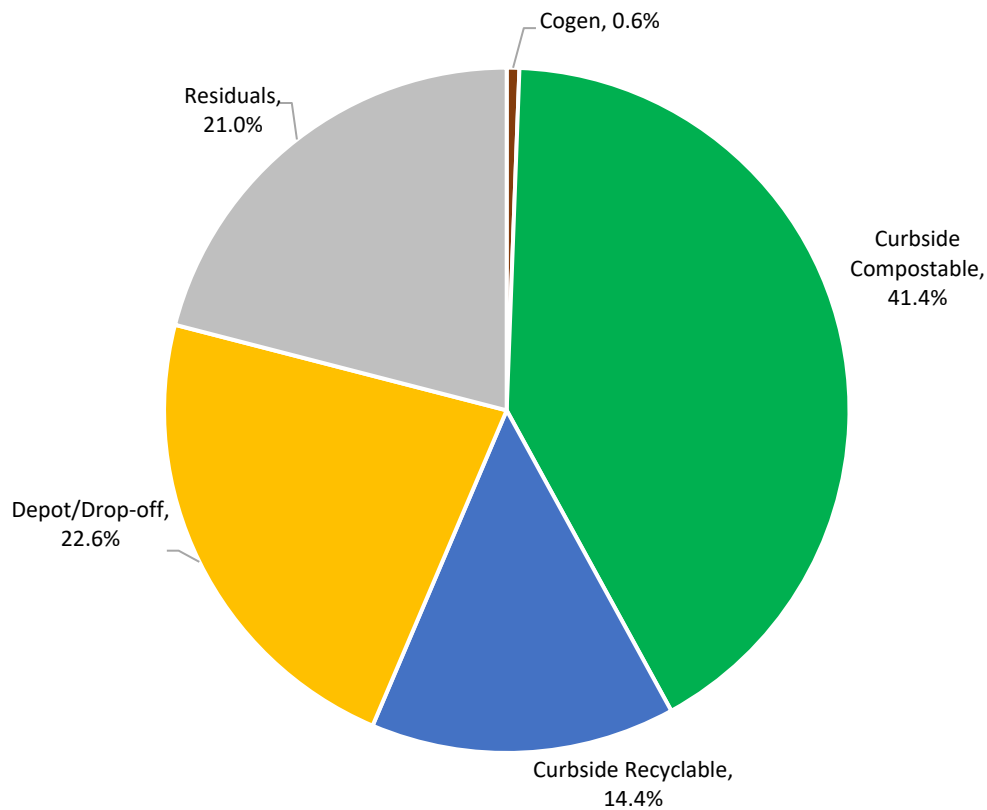


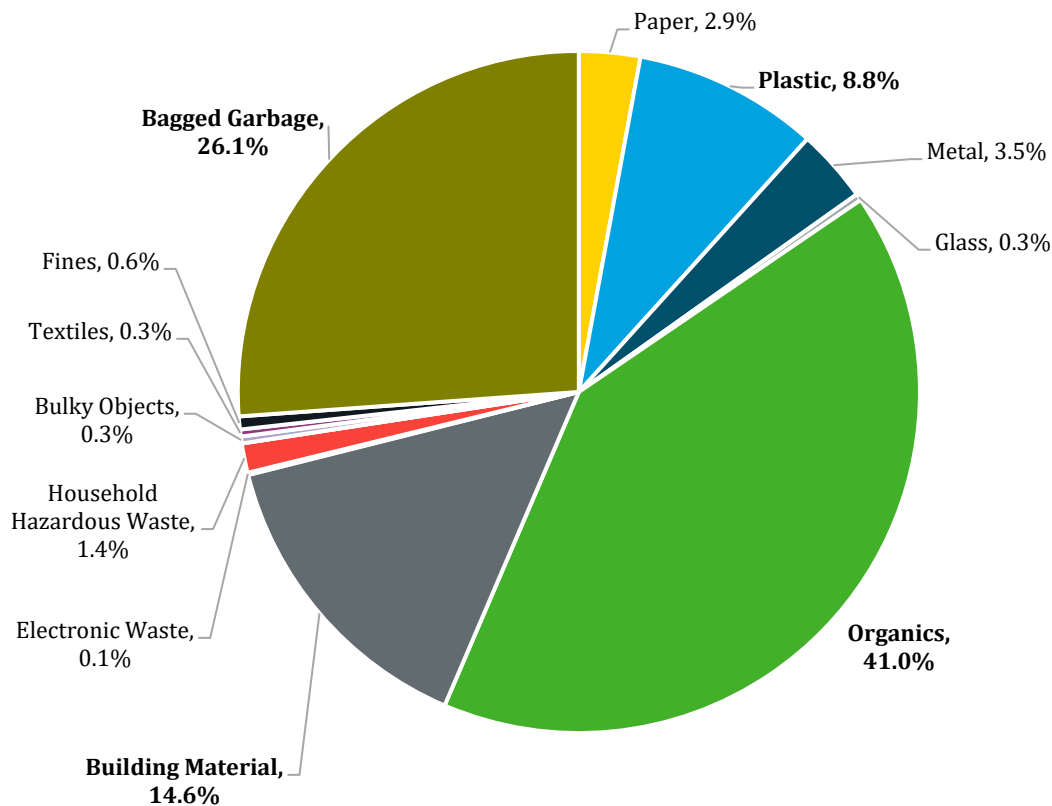
Figure 3-6: Diversion Potential of Landfilled Material from the ICI Waste Stream

## 3.4 Construction and Demolition

The following summarizes the C&D sector results. Six individual C&D loads were visually audited.

### 3.4.1 Waste Composition Results

The observed C&D waste was largely made up of organics (41.0%), bagged garbage (26.1%), building materials (14.6%), and plastic (8.8%).



**Figure 3-7: C&D Waste Composition**

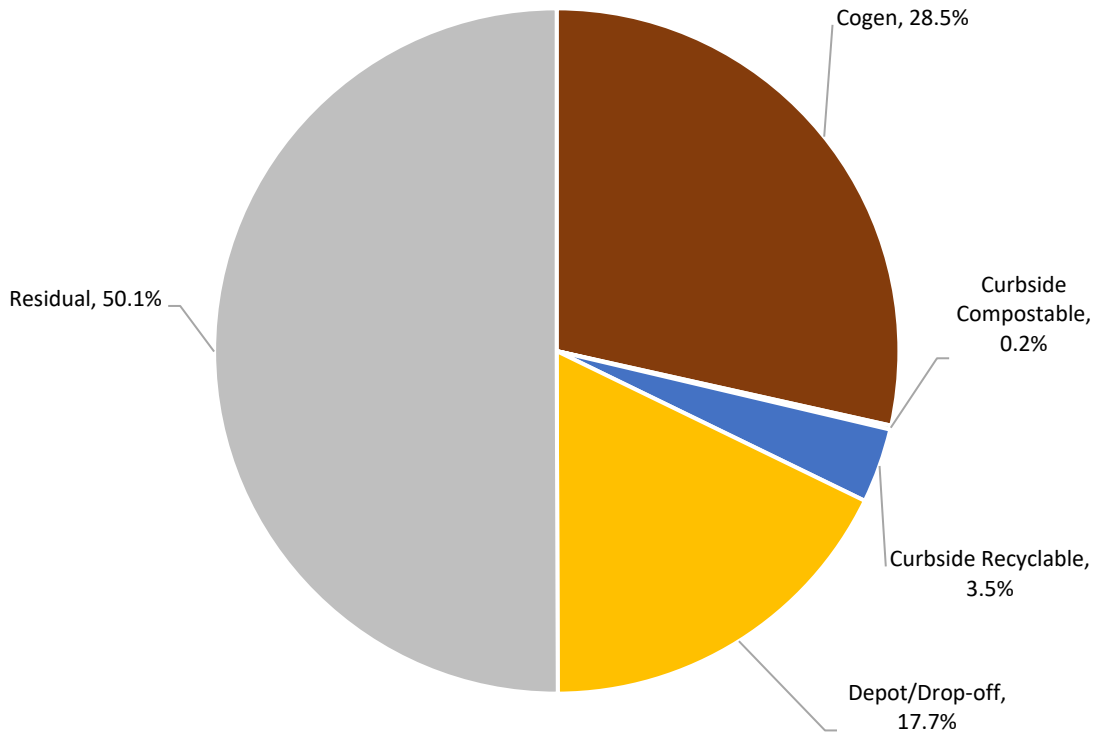
Organics from the visual audits were largely comprised of compostable wood (15.3%), co-gen wood (13.2%), and landfill wood (12.3%).

Building materials were made up primarily of rigid asphalt products (6.7%), masonry (4.9%), gypsum/drywall plaster (1.7%), and carpet waste (1.0%).

For plastics, the observed loads included durable products (5.6%), film products (1.5%), and rigid packaging (1.0%).

### 3.4.2 Diversion Potential

The diversion potential of the C&D waste stream is presented on Figure 3-8. Approximately 49.9% of the waste could theoretically be diverted from the landfill. Materials that could have been diverted for co-generation (28.5%) made up the largest portion of non-residual materials. Depot/Drop-off materials (17.7%) and curbside recyclable (3.5%) were the next largest areas of diversion potential.



**Figure 3-8: Diversion Potential of Landfilled Material from the C&D Waste Stream**

## 3.5 Streetscapes

In total, four samples were obtained from downtown streetscapes and from various locations in the District. Two of which were hauled to the landfill on Monday, August 17, 2020, and two came on Friday, August 21, 2020. The District arranged for two separate routes to assess the differences in composition: downtown streetscape and other streetscape. Usually, these are collected as a single collection route.

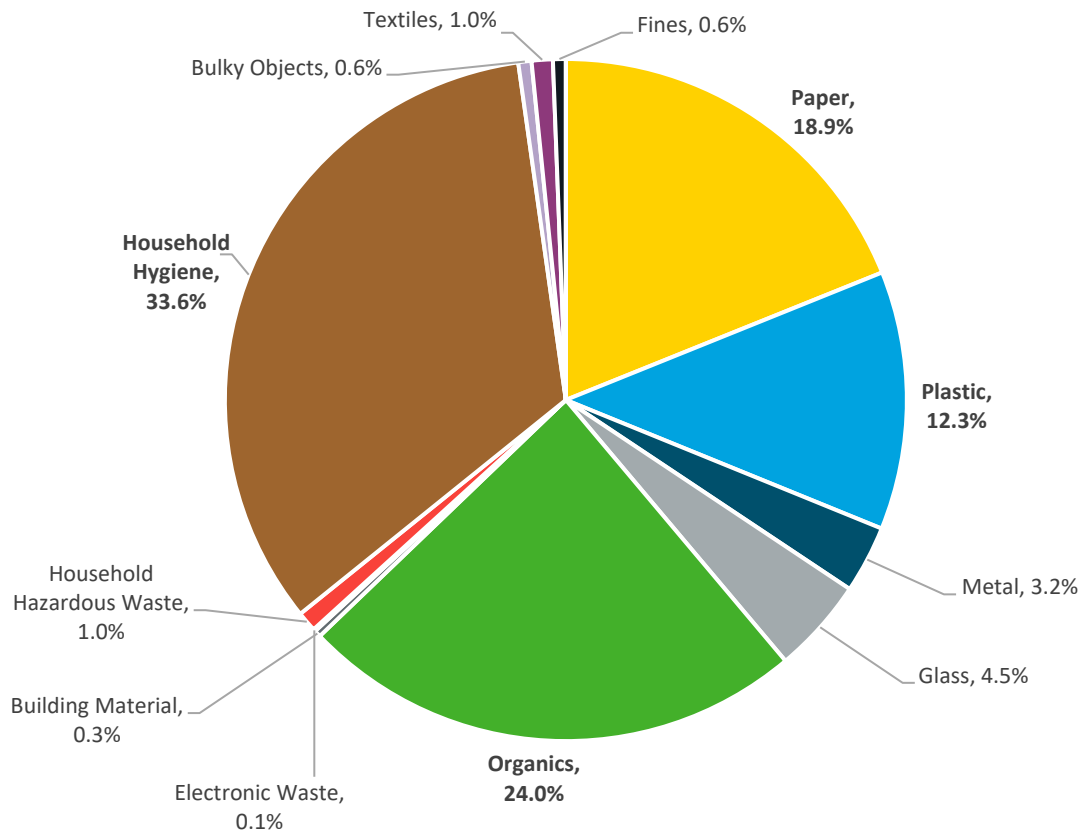
The downtown streetscape samples were collected from bins in the Downtown Squamish area extending from Bailey Street to Vancouver Street, and from 3<sup>rd</sup> Avenue to the Mamquam Blind Channel.

The other streetscape samples included waste from bus stops, trailheads, crosswalks, select parks, and schools outside of the Downtown Squamish area.

### 3.5.1 Waste Composition Results

#### Total Streetscapes

The composition of waste from streetscape samples is illustrated on Figure 3-9 below. Most of the streetscape waste consisted of pet waste (33.6%) which is subcategory of household hygiene. Other material categories in the streetscape samples include organics (24.0%), paper (18.9%), and plastics (12.3%).



**Figure 3-9: Total Streetscape Waste Composition**

Household hygiene (33.6%) was predominantly comprised of pet waste, though diapers were occasionally observed as well. An example of a household hygiene sorting bin is included on Figure 3-10, from sample STR-04.

Organics was mostly made up of avoidable food waste (14.4%), unavoidable food waste (7.1%) and yard waste (2.0%).

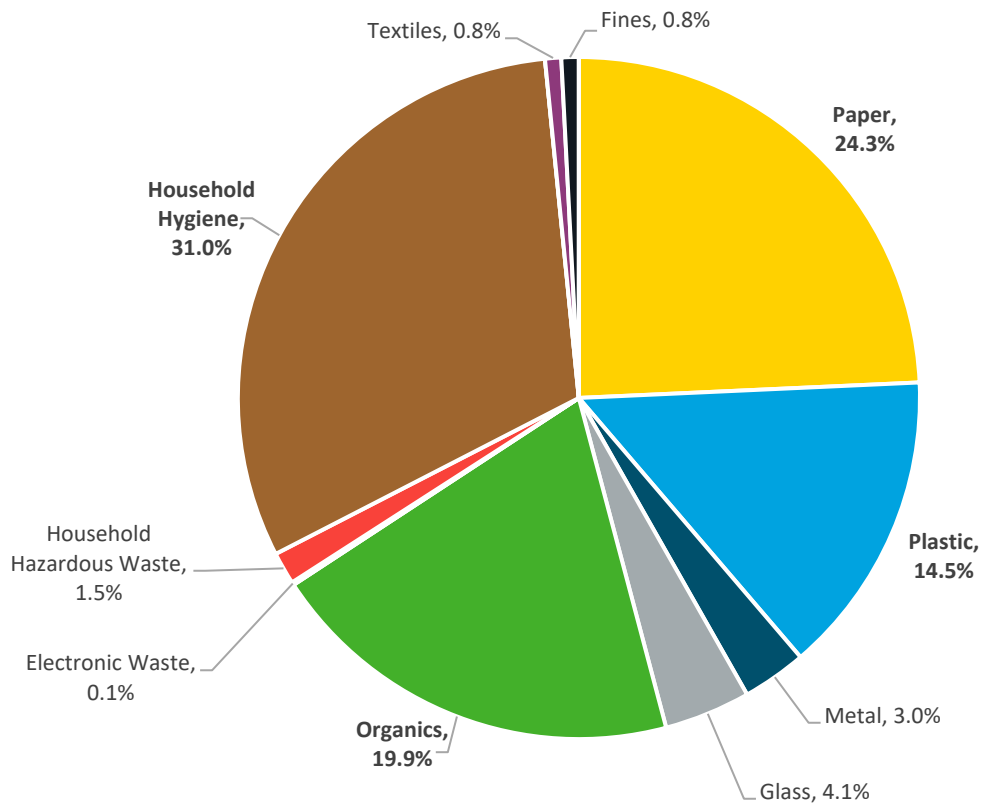
For the paper primary category, compostable paper (8.2%) was the largest component, followed by recyclable paper (3.4%), which contained a large amount of newsprint, magazines, and cardboard. Other common paper categories included paper takeout containers labelled compostable (2.1%), plastic lined paper takeout containers (1.5%), single-use poly coat cups (1.5%), and other/non-Recycle BC paper (1.3%).



**Figure 3-10: Household Hygiene Sorting Bin**

### Downtown Streetscapes

Waste composition results from the two downtown streetscape samples are portrayed on Figure 3-11 below. Similar to above, household hygiene (31.0%) formed the largest percentage of the sampled waste, followed by paper (24.3%), organics (19.9%), and plastic (14.5%).



**Figure 3-11: Downtown Streetscapes Waste Composition**

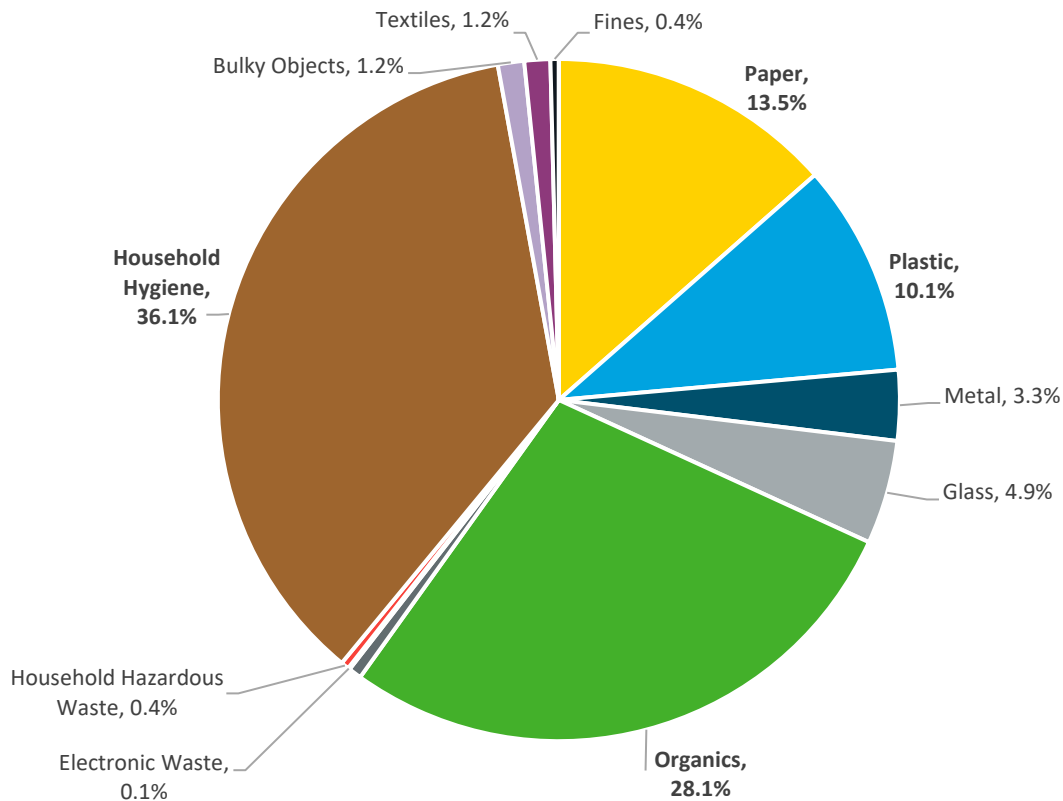
Again, pet waste made up the bulk of the household hygiene category (31.0%). By placing pet waste specific bins adjacent to the general streetscape bins could drastically reduce the amount of landfilled waste from this stream. Some jurisdictions, such as Metro Vancouver, have separate bins for pet waste disposal. The pet waste in these bins is manually separated from their bags and placed in the wastewater treatment system.

The paper category was largely represented by compostable paper (10.8%), recyclable paper (3.4%), plastic lined paper takeout containers (2.8%), other/non-Recycle BC paper (2.2%), single-use poly coat cups (1.9%) and paper takeout containers labelled compostable (1.8%).

Organics was predominantly food waste, made up of avoidable food waste (12.5%), unavoidable food waste (5.3%), and yard waste (1.7%).

**Other Streetscapes**

Waste composition results from the other streetscapes samples is depicted on Figure 3-12 below. For this sample, pet waste (household hygiene category) (36.1%) was the largest component of the waste stream, followed by organics (28.1%), paper (13.5%), and plastic (10.1%).



**Figure 3-12: Other Streetscapes Waste Composition**

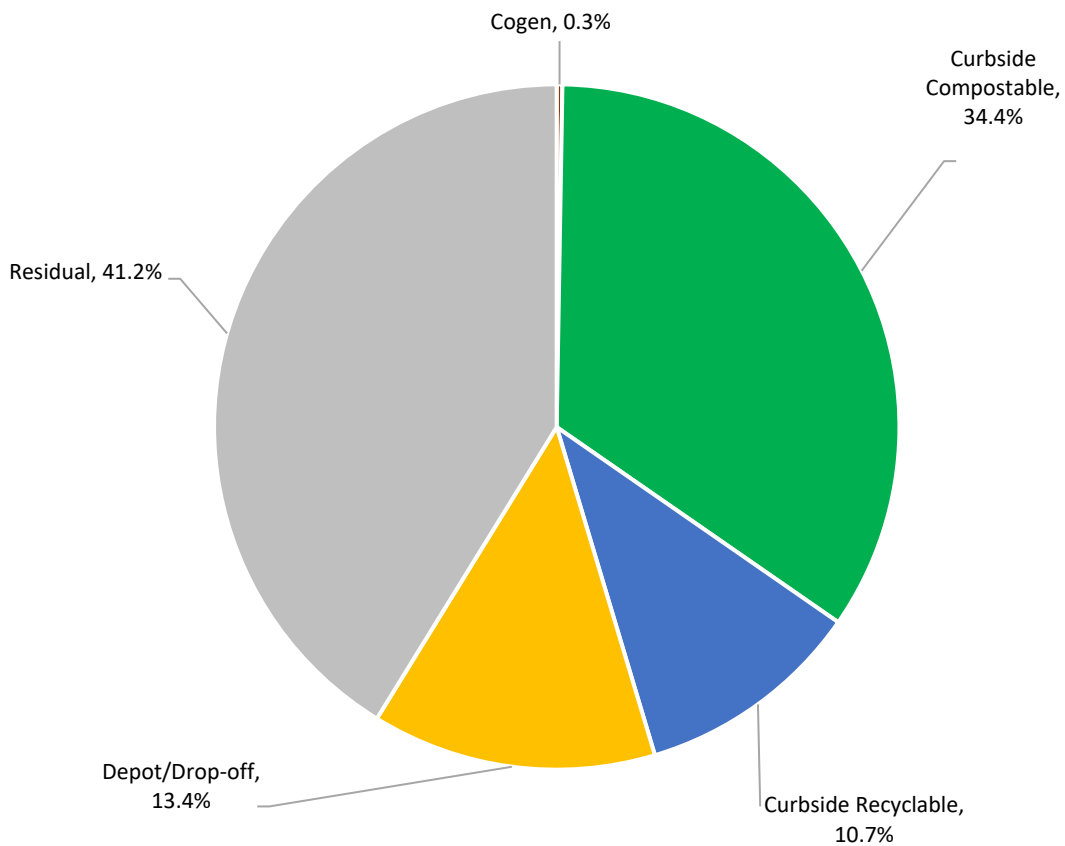
Organics from the other streetscapes sample was largely made up of avoidable food waste (16.3%), unavoidable food waste (8.8%), and yard waste (2.3%).

Paper was observed to include compostable paper (5.5%), recyclable paper (3.3%), paper takeout containers labelled compostable (2.4%), and single-use poly coat cups (1.1%).

For the plastics category, the main observed categories were rigid packaging (2.1%), flex packaging (1.2%), film products (1.4%), and film packaging (0.9%).

### 3.5.2 Diversion Potential

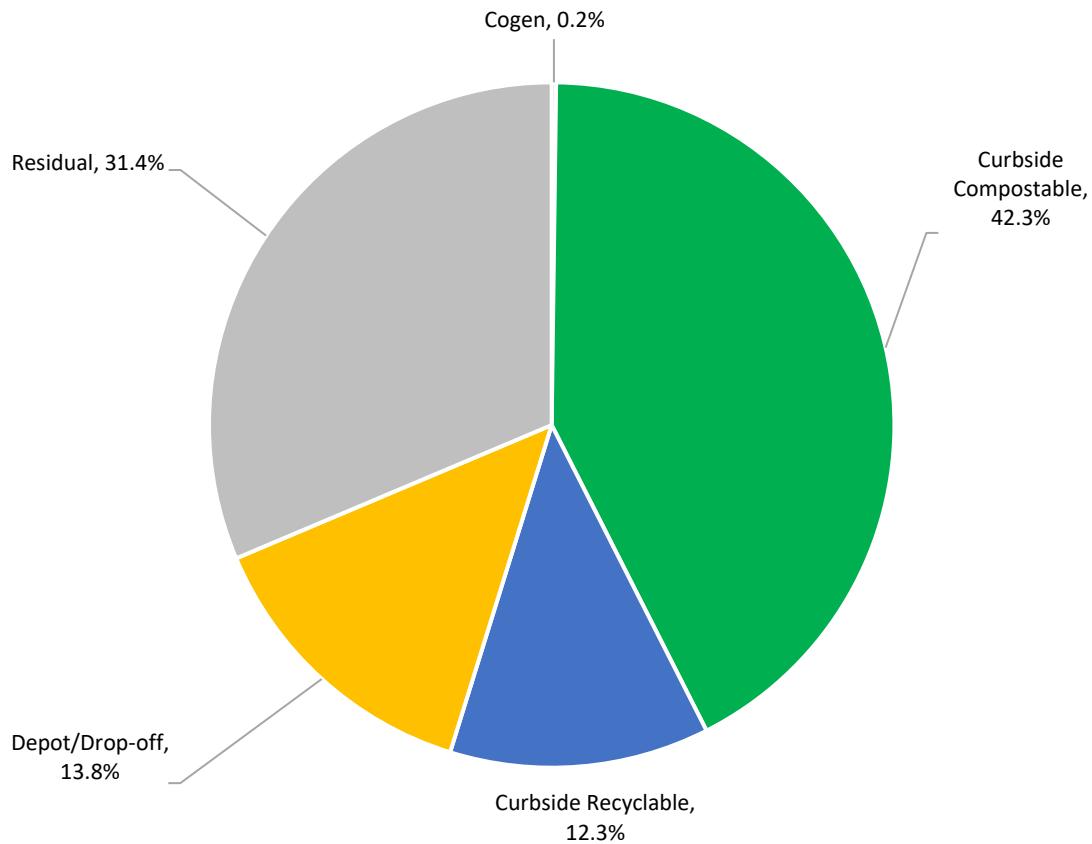
The diversion potential of the sampled waste from the streetscapes waste stream is presented on Figure 3-13. From the streetscape waste, approximately 58.8% of the waste could theoretically be diverted from the landfill. Curbside compostable (34.4%) materials are the biggest potential area for waste diversion for streetscape samples. Depot/drop-off (13.4%) and curbside recyclable (10.7%) are other areas that have diversion potential.



**Figure 3-13: Diversion Potential of Landfilled Material from the Streetscapes Waste Stream**

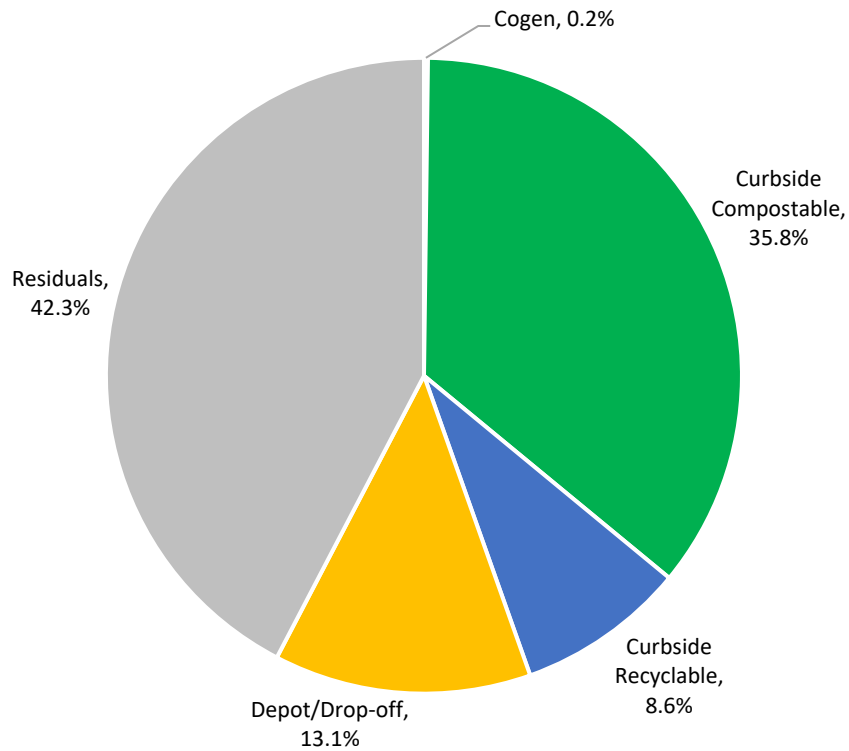
The diversion potential of the sampled waste from the downtown streetscape waste stream is presented on Figure 3-14. From the samples, approximately 60.1% of the waste could theoretically be diverted from the landfill. Curbside compostable (42.3%) was the largest potential area for waste diversion, followed by depot/drop-off (13.8%) and curbside recyclable (12.3%).





**Figure 3-14: Diversion Potential of Landfilled Material from the Downtown Streetscapes Waste Stream**

The diversion potential of the sampled waste from the other streetscapes waste stream is presented on Figure 3-15. From other streetscapes waste, approximately 57.7% of the waste could theoretically be diverted from the landfill. The largest area for diversion potential was curbside compostable (35.8%), due to the high percentages of avoidable (16.3 %) and unavoidable food (8.8%). Other areas for diversion potential are depot/drop-off (13.1%) and curbside recyclable (8.6%).



**Figure 3-15: Diversion Potential of Landfilled Material from the Other Streetscapes Waste Stream**

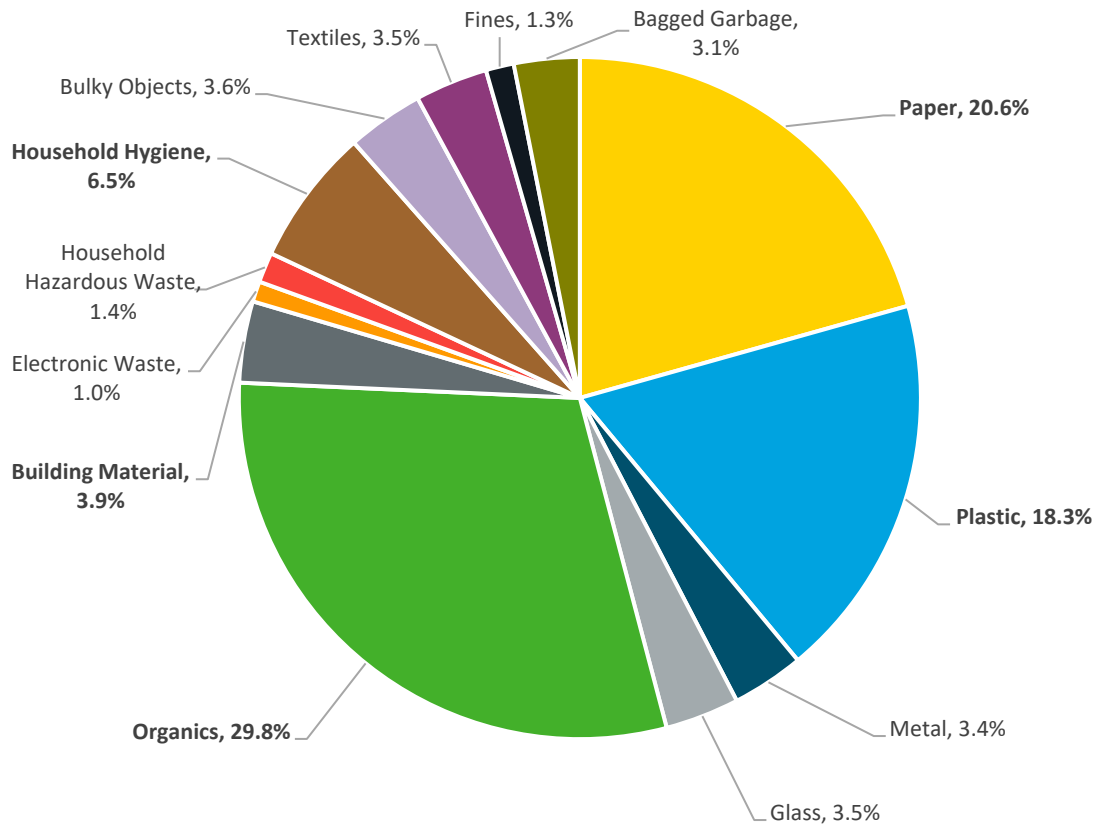
### 3.6 Combined Overall District Waste Composition

The 2019 disposal tonnages by sector are summarized in Table 3-1. It should be noted that MF and ICI loads (6,904.6 tonnes) are typically collected in the same truck. The collection contractor estimated that the MF waste stream makes up approximately 17% of the MF/ICI materials collected based on August 2020 collection data.

**Table 3-1: 2019 Disposal by Sector**

Sector	2019 Tonnage
SF Residential	2,528.3
MF Residential (Estimate)	1,173.8
ICI Sector (Estimate)	5,730.8
C/D Sector	1,277.4
<b>Total</b>	<b>10,710.3</b>

Figure 3-9 is an average of the material composition from the SF residential, MF residential, ICI, and C&D sectors. A weighted average was calculated based on 2019 disposal figures above. Organics (29.8%) made up the largest percentage of the primary categories, followed by paper (20.6%), plastic (18.3%), household hygiene (6.5%), and building materials (3.9%).



**Figure 3-16: Combined Waste Composition**

Organics were mainly comprised of food waste (19.3%) and wood waste (8.2%). The breakdown of food waste was 12.4% avoidable and 6.9% unavoidable. Note that wood waste and bagged garbage came primarily from C&D sources, and the composition of wood waste from C&D is more than 20% whereas from other sectors it is less than 2%.

Paper was primarily made up of compostable paper (11.7%), recyclable paper (5.1%), and other/non-Recycle BC paper (1.5%).

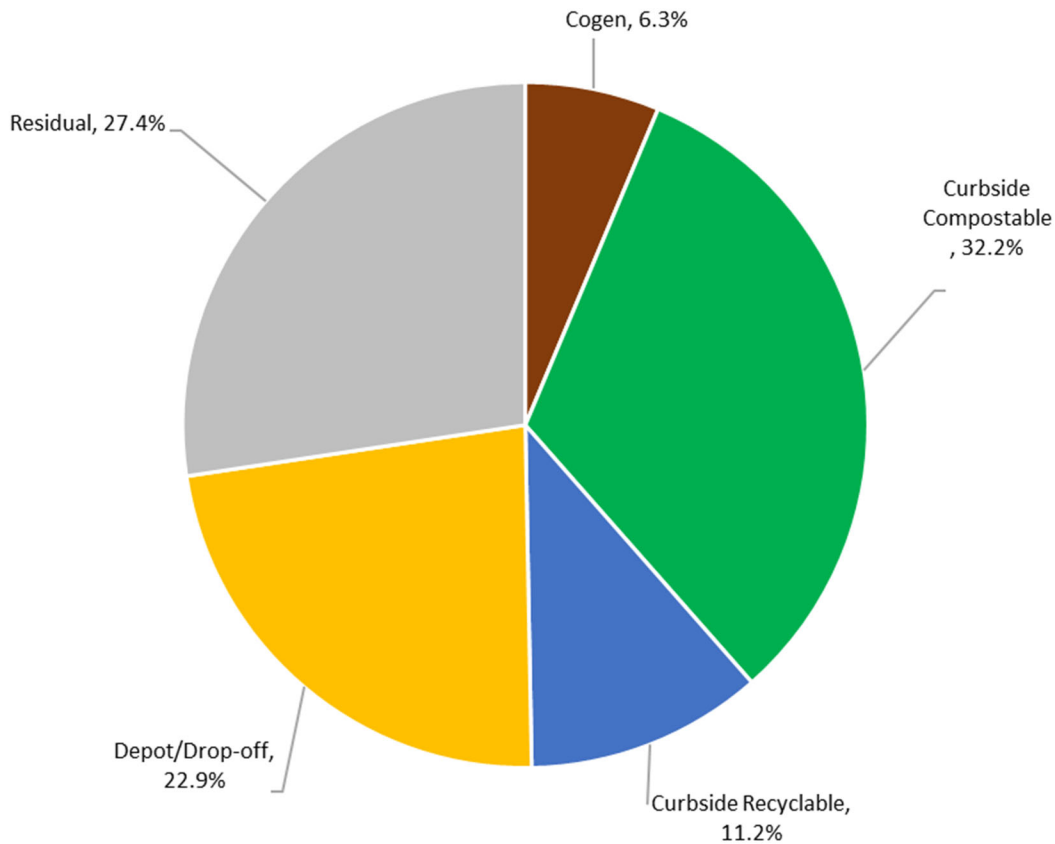
For plastics, the largest categories by weight were film products (4.2%), flex packaging (3.7%), durable products (3.1%), rigid packaging (2.6%), and film packaging (1.5%).

Some common items in the household hygiene category included diapers and pet waste.

### 3.6.1 Diversion Potential

Based on the combined waste audit results, the percentage of materials that could be diverted from landfill was estimated and presented on Figure 3-17. Classifications for what can be diverted through recycling or composting can be found in Appendix A and Appendix B. Theoretically, 72.6% of material could have been diverted from landfill.

Curbside compostable (32.2%) was the largest opportunity for diversion, followed by depot/drop-off (22.9%) and curbside recyclable (11.2%).



**Figure 3-17: Diversion Potential of Landfilled Material from the Combined Waste Stream**

### 3.7 Single-Use Items

After each sample was weighed and recorded, Tetra Tech staff completed an additional SUIs assessment. Descriptions of all SUIs analyzed is included in Appendix A. It was determined that SUIs made up between 3.3% and 9.8% of the waste stream depending on the sector. Total SUI percentages by sector are presented in Table 3-2 below.

**Table 3-2: SUI Percentages by Sector**

Sector	% of Load
SF Residential	3.5%
MF Residential	3.3%
ICI Sector	6.0%
Streetscapes (STR)	9.8%

Multi-family (3.3%) was determined to have the smallest percentage of SUIs per sample and streetscapes (9.8%) had the highest percentage of SUIs per sample.

For each SF, MF, ICI, and STR sample, SUIs were individually counted and weighed. Table 3-3 presents the average number of SUIs per category per sample. The number of each SUI varied greatly between samples. In general, SUI counts were lower in SF and MF streams than in the ICI and STR streams. For example, single-use poly coat cups ranged from an average of 13.6/sample for SF to 74.8/sample in the STR waste stream.

**Table 3-3: Average Number of SUI per 100 kg**

SUI Category	SUI Item	SF	MF	ICI	STR
Retail Bags	Paper Bags	0.7	2.3	1.0	2.8
	Re-used Plastic Bags	29.8	18.6	19.9	17.8
	Empty Plastic Bags	29.4	5.2	16.2	16.6
	Plastic Bags Labelled Compostable or Biodegradable	3.6	1.4	11.7	1.7
Cups	Single-use Cups (Plastic)	5.1	16.3	34.5	23.0
	Single-use Cups (Poly-coat Paper)	13.3	28.7	73.2	73.2
	Foam Single-use Cups	0.0	1.6	2.0	14.4
	Single-use Cups Labelled Compostable or Biodegradable	1.2	1.3	1.1	11.6
	Paper Cups Labelled Compostable	0.6	3.5	2.5	23.0
Takeout Containers	Takeout Containers (Plastic)	5.8	5.7	54.8	11.8
	Takeout Containers (Plastic Lined Paper)	6.4	5.9	23.3	23.0
	Foam Takeout Containers	0.7	0.8	3.6	4.5
	Takeout Containers Labelled Compostable or Biodegradable	1.8	2.2	5.7	18.8
	Paper Takeout Labelled Compostable	13.9	14.6	18.3	51.7
Straws	Single-use Straws	10.9	13.4	35.6	49.8
Utensils	Single-use Utensils	16.5	29.0	30.6	73.0

Using the average number of SUI per 100 kg and 2019 disposal data (included in Section 3.6), estimated numbers of SUIs Disposed in 2019 are depicted in Table 3-4. A combined total is also included based on the waste composition data. It is estimated that almost 4.5 million single-use poly coat cups were disposed in the Squamish Landfill in 2019. Other items of note include takeout plastic containers (2.9 million), utensils (2.5 million), straws (2.3 million), single-use plastic cups (2.1 million), and re-used plastic bags (2.1 million). It should be noted that these estimations are based off of the snapshot of waste sampled from August 17 to August 22, 2020, so some fluctuations in composition can be expected over the year. As the MF and ICI tonnages were combined, it is assumed that there is a 30/70 percentage split accordingly for our calculations.

**Table 3-4: Estimated Numbers of SUIs Disposed in 2019 per Sector**

SUI Category	SUI Item	SF	MF	ICI	Combined
Retail Bags	Paper Bags	18,502	47,028	46,736	<b>112,266</b>
	Re-used Plastic Bags	753,684	384,637	964,217	<b>2,102,537</b>

SUI Category	SUI Item	SF	MF	ICI	Combined
	Empty Plastic Bags	743,818	108,329	782,751	<b>1,634,898</b>
	Plastic Bags Labelled Compostable or Biodegradable	90,542	29,027	564,485	<b>684,054</b>
Cups	Single-use Cups (Plastic)	129,879	338,344	1,669,704	<b>2,137,927</b>
	Single-use Cups (Poly-coat Paper)	336,354	594,021	3,535,843	<b>4,466,219</b>
	Foam Single-use Cups	-	32,309	94,261	<b>126,570</b>
	Single-use Cups Labelled Compostable or Biodegradable	31,009	27,338	54,573	<b>112,920</b>
	Paper Cups Labelled Compostable	14,979	72,520	119,212	<b>206,711</b>
Takeout Containers	Takeout Containers (Plastic)	145,462	117,881	2,647,341	<b>2,910,684</b>
	Takeout Containers (Plastic Lined Paper)	162,653	121,632	1,125,430	<b>1,409,714</b>
	Foam Takeout Containers	18,039	15,815	175,464	<b>209,317</b>
	Takeout Containers Labelled Compostable or Biodegradable	46,138	45,554	275,094	<b>366,786</b>
	Paper Takeout Labelled Compostable	352,507	301,833	884,825	<b>1,539,165</b>
Straws	Single-use Straws	276,341	276,977	1,720,560	<b>2,273,878</b>
Utensils	Single-use Utensils	417,557	601,346	1,479,564	<b>2,498,467</b>

Table 3-5 depicts the estimated tonnage of each SUI category and the percentage of the combined waste stream (SF, MF and ICI) they make up. In total, SUIs make up 5.1% of this waste stream.

**Table 3-5: SUI Tonnages in the Waste Stream**

SUI Category	SUI Item	2019 Tonnage	Percentage of the Waste Stream
Retail Bags	Paper Bags	7.6	0.1%
	Re-used Plastic Bags	53.8	0.6%
	Empty Plastic Bags	27.5	0.3%
	Plastic Bags Labelled Compostable or Biodegradable	16.8	0.2%
Cups	Single-use Cups (Plastic)	42.7	0.5%
	Single-use Cups (Poly-coat Paper)	110.3	1.2%
	Foam Single-use Cups	0.7	0.0%
	Single-use Cups Labelled Compostable or Biodegradable	4.9	0.1%
	Paper Cups Labelled Compostable	6.7	0.1%
Takeout Containers	Takeout Containers (Plastic)	47.1	0.5%
	Takeout Containers (Plastic Lined Paper)	52.7	0.6%
	Foam Takeout Containers	6.5	0.1%

SUI Category	SUI Item	2019 Tonnage	Percentage of the Waste Stream
	Takeout Containers Labelled Compostable or Biodegradable	12.5	0.1%
	Paper Takeout Labelled Compostable	70.3	0.7%
Straws	Single-use Straws	6.1	0.1%
Utensils	Single-use Utensils	12.1	0.1%
	<b>Combined</b>	<b>478.3</b>	<b>5.1%</b>

## 4.0 COMPARISON OF 2016, 2018, AND 2020 WASTE AUDIT DATA

The waste audits from 2016, 2018, and 2020 were compared and analyzed to determine whether there were any trends in the waste management practices in the District. T-tests were conducted on the 2018 and 2020 data to determine if there were any differences that would be considered significant (p-value < 0.05).

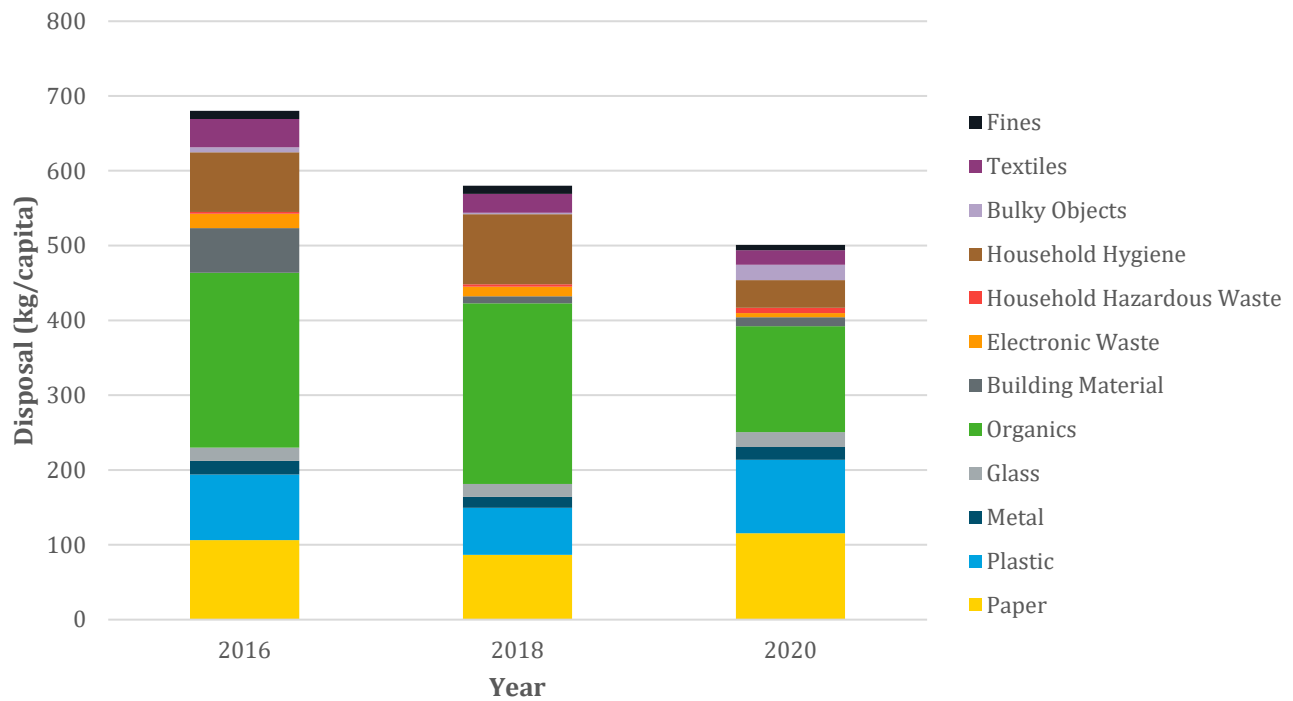
### 4.1 Per Capita Disposal Rate

Table 4-1 below depicts the estimated per capita disposal rate in 2016, 2018, and 2020. The 2020 per capita disposal rate was calculated based off 2019 tonnage data and divided by the District’s estimated population (3% annual population growth since 2018). The District is continuing to move towards their goal of 350 kg/capita.

**Table 4-1: Estimated Per Capita Disposal Rate**

Year	Kg/Capita
2016	680
2018	580
2020	500

Figure 4-1 illustrates how the composition of the waste stream has changed from 2016 to 2020. The chart also shows how the per capita disposal rates have changed since 2016.

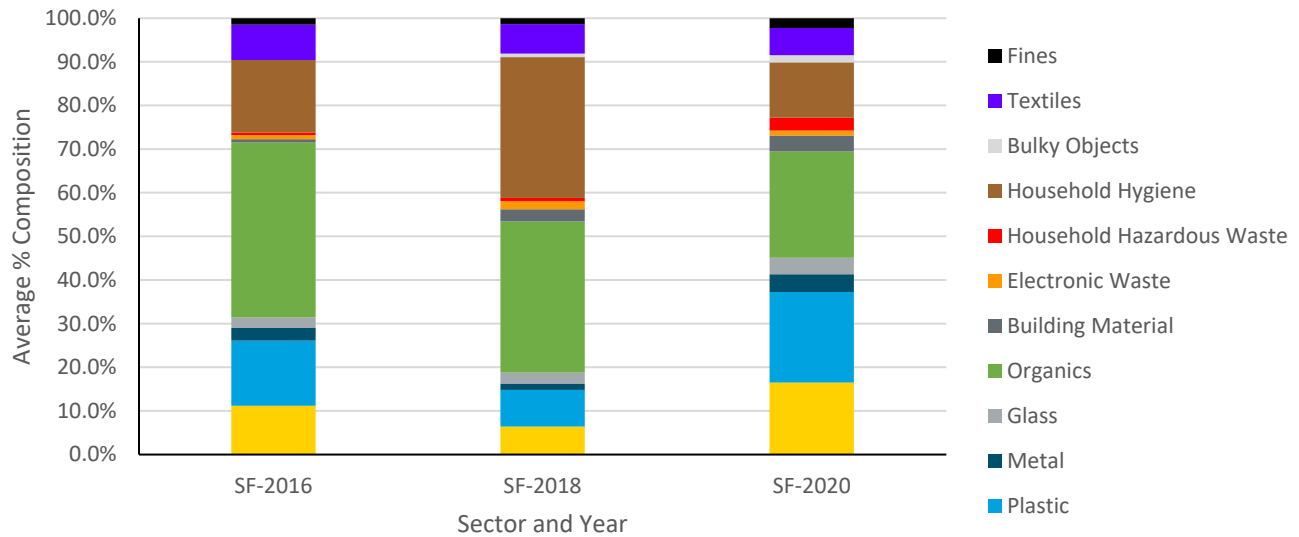


**Figure 4-1: Annual Per Capita Disposal Rate**

## 4.2 SF Residential

The average proportion of organics in the SF waste stream dropped from 40.1% (in 2016) to 34.6% (in 2018) and down to 24.3% (in 2020). T-test analysis indicated that this drop was significant. Household hygiene also decreased significantly over the same time frame, from 32.3% to 12.6%. These decreases resulted in paper and plastics to increase proportionally. Paper products increased from 6.4% (in 2018) to 16.6% (in 2020) of the waste stream and plastics rose from 8.4% (in 2018) to 20.7% (in 2020). Figure 3-1 below depicts the average changes in composition from 2016 to 2020.

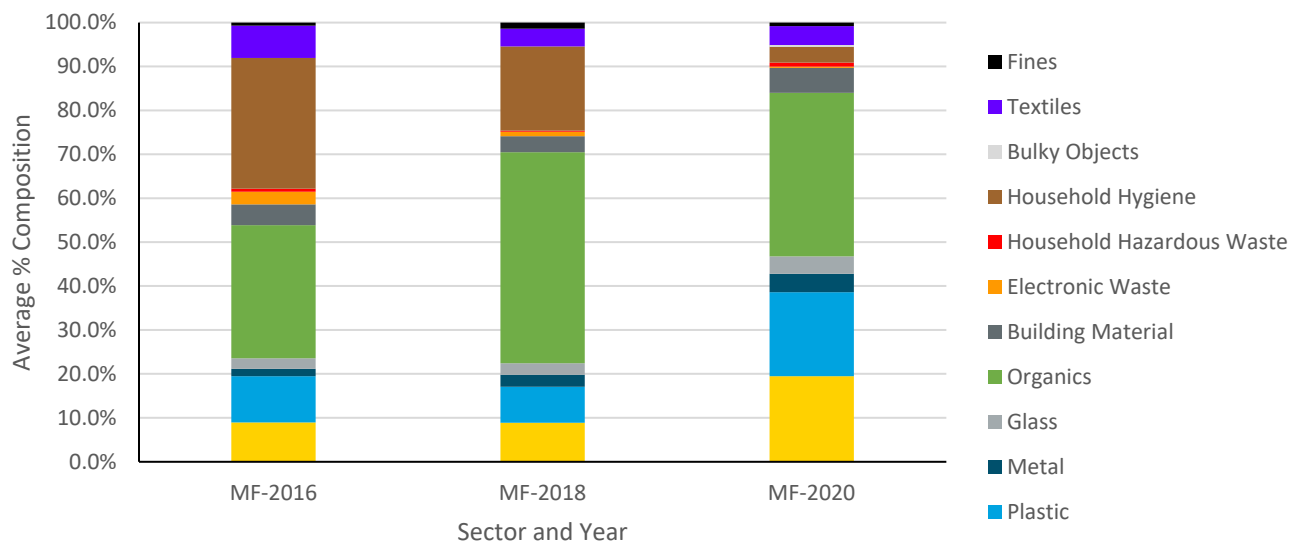




**Figure 4-2: Comparison of SF Waste Stream from 2016 to 2020**

### 4.3 MF Residential

The average percentage of organics in the MF waste stream dropped from 48.0% to 36.5% from 2018 to 2020; however, T-test analysis indicated that this drop was not considered statistically significant. Household hygiene dropped significantly as well from 2018 and 2020. Due to these large category decreases, the proportion of paper and plastics in the MF waste stream increased significantly. From 2018 to 2020, paper and plastic grew from an average of 8.9% to 19.8% and 8.2% to 19.4% respectively. Figure 4-3 below depicts the changes in composition from 2016 to 2020.



**Figure 4-3: Comparison of MF Waste Stream from 2016 to 2020**

## 4.4 ICI

The average percentage of organics in the ICI waste stream dropped from 42.8% (in 2018) to 28.4% (in 2020). However, T-test analysis indicate that this is not a significant decrease. One sample (ICI-02) was observed to have a high percentage of organics (59%), largely due to a high amount of grocery store and restaurant waste. The decrease in organics in the waste stream resulted in notable increases in paper (21.0% to 26.6%) and plastic (12.9% to 19.2%) categories from 2018 to 2020. T-test analysis on the 2018 and 2020 ICI samples indicate that only the plastic category increased by a significant margin. Figure 4-4 depicts the changes in composition from 2016 to 2020.

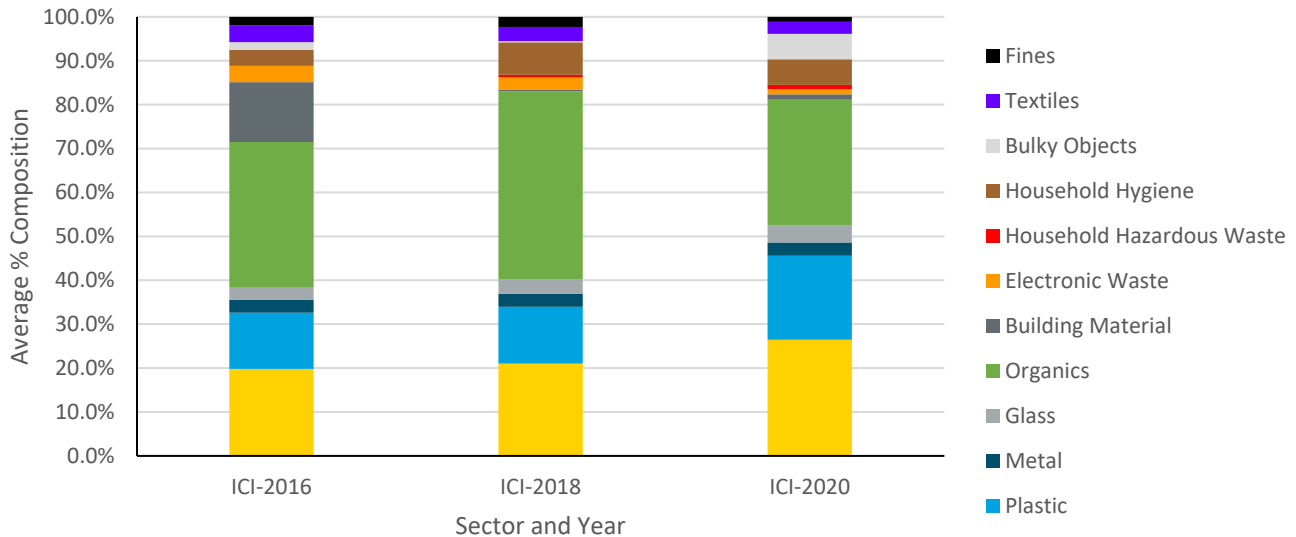


Figure 4-4: Comparison of ICI Waste Stream from 2016 to 2020

## 5.0 EXTENDED PRODUCER RESPONSIBILITY RESULTS

Results by primary category for the concurrent EPR characterization study conducted in partnership with SABC are presented in Table 5-1. Category definitions are included in Appendix C. EPR items make up approximately 23.7% to 27.6% of the waste stream. The largest amount of EPR items were found in the ICI sector, with over half being Recycle BC packaging which is not currently being collected from that sector. This was not accounted for in our diversion potential calculations. In general, packaging (ranges from 13.4% to 21.5%) was the largest category of EPR items, followed by printed paper (ranges from 1.7% to 4.5%), and beverage containers (returnable to Encorp) (ranges from 1.8% to 3.1%).

Table 5-1: Composition of Extended Producer Responsibility Items by Sector

Primary Category	SF	MF	ICI
BDL Beverage Containers	0.1%	0.5%	0.4%
BDL Packaging	<0.1%	0.2%	0.2%
BDL/Encorp Pacific Beverage Containers	0.1%	0.8%	0.2%
Encorp Beverage Containers	1.8%	3.1%	2.5%

Primary Category	SF	MF	ICI
Newsprint	0.1%	0.4%	0.3%
Other Printed Paper	1.7%	4.5%	1.9%
Recycle BC Packaging	17.6%	13.4%	21.5%
Tires	0.2%	<0.1%	<0.1%
Oil and Antifreeze	0.1%	<0.1%	<0.1%
Lead-Acid Batteries	<0.1%	<0.1%	<0.1%
Single Use/Rechargeable < 5 kg	0.1%	<0.1%	0.1%
Paint/Pesticides/Solvents/Gasoline	0.7%	0.2%	0.2%
Lighting Equipment	<0.1%	<0.1%	<0.1%
Alarms	0.1%	<0.1%	<0.1%
Electronics	0.6%	0.6%	<0.1%
Mobile Devices	<0.1%	<0.1%	<0.1%
Heating/Ventilation/Air Conditioning/Refrigeration/Plumbing Products	<0.1%	<0.1%	<0.1%
Thermostats	<0.1%	<0.1%	<0.1%
Outdoor Power Equipment	<0.1%	<0.1%	<0.1%
Small Appliances and Power Tools	1.6%	<0.1%	0.2%
Major Household Appliances	<0.1%	<0.1%	<0.1%
Medications	<0.1%	<0.1%	<0.1%
<b>EPR Products Subtotal</b>	<b>24.8%</b>	<b>23.7%</b>	<b>27.6%</b>
Non-EPR Products	75.2%	76.3%	72.4%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

## 6.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of the District and their agents. Tetra Tech Canada Inc. (Tetra Tech) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than the District, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this document is subject to the Limitations on the Use of This Document attached in the Appendix or Contractual Terms and Conditions executed by both parties.

## 7.0 CLOSURE

We trust this technical memo meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,  
Tetra Tech Canada Inc.



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## APPENDIX A

### SORTING MATERIAL CATEGORIES

Primary Category	#	Secondary Category	Description	Diversion Potential
Paper	01	Paper - refundable	Tetrapaks, bottle deposit	Depot/Drop-off
	02	Paper - recyclable	Fine, office, magazines, cardboard,	Curbside Recyclable
	03	Paper - compostable <sup>1</sup>	Food-soiled paper, pizza boxes, paper towels	Curbside Compostable
	04	Paper - other/non-Recycle BC	Non-recyclable, books, tar paper, composites	Residual
	05	Paper Bags	Paper Bags	Curbside Compostable
	06	Single-use Cups (Poly-coat Paper)	Single-use Cups (Poly-coat)	Curbside Recyclable
	07	Takeout Containers (Plastic Lined Paper)	Takeout Containers (Plastic Lined Paper)	Curbside Recyclable
Plastics	08	Plastic - refundable	Bottle deposit plastic	Depot/Drop-off
	09	Plastic - rigid packaging	#1-7, un-coded, excludes foam packaging	Curbside Recyclable
	10	Plastic - durable products	Non-packaging such as tapes, toys, household objects	Residual
	11	Plastic – foam packaging	Foam Packaging	Depot/Drop-off
	12	Plastic - film packaging	Retail bags and wrap	Depot/Drop-off
	13	Plastic - flex packaging	Ziploc bags, chip bags, stand-up bags	Depot/Drop-off
	14	Plastic - film products	Non-packaging such as tarps, pallet wrap	Residual
	15	Re-used Plastic Bags	Re-used Plastic Bags	Residual
	16	Empty Plastic Bags	Empty Plastic Bags	Depot/Drop-off
	17	Plastic Bags Labelled Compostable or Biodegradable	Plastic Bags Labelled Compostable or Biodegradable	Residual
	18	Single-use Cups (Plastic)	Single-use Cups (Plastic)	Curbside Recyclable
	19	Foam Single-use Cups	Foam Single-use Cups	Depot/Drop-off
	20	Single-use Cups Labelled Compostable or Biodegradable	Single-use Cups Labelled Compostable or Biodegradable	Residual
	21	Takeout Containers (Plastic)	Takeout Containers (Plastic)	Curbside Recyclable
	22	Foam Takeout Containers	Foam Takeout Containers	Depot/Drop-off
	23	Takeout Containers Labelled Compostable or Biodegradable	Takeout Containers Labelled Compostable or Biodegradable	Residual
	24	Single-use Straws	Single-use Straws	Residual

<sup>1</sup> Paper straws were not defined as a separate category and were included in the Paper – Compostable category

Primary Category	#	Secondary Category	Description	Diversion Potential
	25	Single-use Utensils	Single-use Utensils	Residual
Metal	26	Metal - refundable	Bottle deposit metal	Depot/Drop-off
	27	Metal - recyclable	Metal containers	Curbside Recyclable
	28	Metal - non-Recycle BC	Metal objects	Depot/Drop-off
Glass	29	Glass - refundable	Bottle deposit glass	Depot/Drop-off
	30	Glass - recyclable	Glass containers	Depot/Drop-off
	31	Glass - non-Recycle BC	Glass and ceramic objects	Depot/Drop-off
Organics	32	Organics - yard waste	Yard trimmings, manure	Curbside Compostable
	33	Organics - avoidable food waste	Food that could have been eaten	Curbside Compostable
	34	Organics - unavoidable food waste	Peelings, bones, coffee grounds, shells	Curbside Compostable
	35	Organics - non-compostable	Leather, rubber, wax - non-clothing, non-hygiene, biodegradable/compostable plastics	Residual
	36	Organics - compostable wood	Pallets, dimensional lumber (no paint, no treatment)	Cogen
	37	Organics - co-gen wood	Plywood, glue-lam, flakeboard, lightly stained or painted wood	Cogen
	38	Organics - landfill wood	Treated, heavily painted or stained, composites, or contains large amounts of other materials	Residual
Building Materials	39	Building Material	Construction material - carpet, gypsum, asphalt, insulation, aggregate	Depot/Drop-off
Electronics	40	Electronic Waste	Anything with a cord or battery operated	Depot/Drop-off
Household Hazardous	41	Household Hazardous Waste - EPR	Batteries, products, mercury containing, paints, oil	Depot/Drop-off
	42	Household Hazardous Waste - non-EPR	Sharps, glues, caulking	Residual
Hygiene	43	Household Hygiene	Diapers, hygiene products, personal care, pet waste	Residual
Bulky Items	44	Bulky Objects	Furniture, appliances, mattresses	Depot/Drop-off
Textiles	45	Textiles	Clothing, linens, bags, shoes	Depot/Drop-off
Fines	46	Fines	<1" size	Residual

## APPENDIX B

### VISUAL AUDIT MATERIAL CATEGORIES



Primary Category	#	Secondary Category	Description	Diversion Potential	Specific Density (kg/yd <sup>3</sup> )
Paper	01	Paper - refundable	Tetrapaks, bottle deposit	Depot/Drop-off	70.3
	02	Paper - recyclable	Fine, office, magazines, cardboard,	Curbside Recyclable	56.8
	03	Paper - compostable	Food-soiled paper, pizza boxes, paper towels	Curbside Compostable	42.1
	04	Paper - other/non-Recycle BC	Non-recyclable, books, tar paper, composites	Residual	70.3
Plastics	05	Plastic - refundable	Bottle deposit plastic	Depot/Drop-off	55.0
	06	Plastic - rigid packaging	#1-7, un-coded, excludes styrofoam	Curbside Recyclable	55.0
	07	Plastic - durable products	Non-packaging such as tapes, toys, household objects	Residual	160.0
	08	Plastic – foam packaging	Foam packaging	Depot/Drop-off	10.7
	09	Plastic - film packaging	Retail bags and wrap	Depot/Drop-off	29.8
	10	Plastic - flex packaging	Ziploc bags, chip bags, stand-up bags	Depot/Drop-off	29.8
	11	Plastic - film products	Non-packaging such as tarps, pallet wrap	Residual	29.8
Metal	12	Metal - refundable	Bottle deposit metal	Depot/Drop-off	10.0
	13	Metal - recyclable	Metal containers	Curbside Recyclable	91.8
	14	Metal - non-Recycle BC	Metal objects	Residual	106.3
Glass	15	Glass - refundable	Bottle deposit glass	Depot/Drop-off	191.1
	16	Glass - recyclable	Glass containers	Depot/Drop-off	191.1
	17	Glass - non-Recycle BC	Glass and ceramic objects	Residual	191.1
Organics	18	Organics - yard waste	Yard trimmings, manure	Curbside Compostable	69.6
	19	Organics - avoidable food waste	Food that could have been eaten	Curbside Compostable	262.2
	20	Organics - unavoidable food waste	Peelings, bones, coffee grounds, shells	Curbside Compostable	262.2
	21	Organics - non-compostable	Leather, rubber, wax - non-clothing, non-hygiene, biodegradable/compostable plastics	Residual	104.0

Primary Category	#	Secondary Category	Description	Diversion Potential	Specific Density (kg/yd <sup>3</sup> )
	22	Organics - compostable wood	Pallets, dimensional lumber (no paint, no treatment)	Cogen	119.3
	23	Organics - co-gen wood	Plywood, glue-lam, flakeboard, lightly stained or painted wood	Cogen	119.3
	24	Organics - landfill wood	Treated, heavily painted or stained, composites, or contains large amounts of other materials	Residual	119.3
Building Materials	25	Gypsum/drywall plaster		Depot/Drop-off	212.3
	26	Masonry (bricks, blocks, concrete, etc.)		Depot/Drop-off	390.9
	27	Rock, sand, dirt, ceramic, porcelain		Depot/Drop-off	390.9
	28	Rigid asphalt products		Depot/Drop-off	332.3
	29	Carpet Waste (and underlay)		Residual	66.8
	30	Other Inorganics (linoleum, etc.)		Residual	66.8
Electronic s	31	Electronic Waste	Anything with a cord or battery operated	Depot/Drop-off	80.3
Household Hazardou s	32	Household Hazardous Waste - EPR	Batteries, products, mercury containing, paints, oil	Depot/Drop-off	130.0
	33	Household Hazardous Waste - non-EPR	Sharps, glues, caulking	Residual	130.0
Hygiene	34	Household Hygiene	Diapers, hygiene products, personal care, pet waste	Residual	173.6
Bulky Items	35	Bulky Objects	Furniture, appliances, mattresses	Depot/Drop-off	80.3
Textiles	36	Textiles	Clothing, linens, bags, shoes	Depot/Drop-off	69.6
Bagged Garbage	37	Bagged Garbage		Residual	523.2
Fines	38	Fines	<1" size	Residual	130.0

## APPENDIX C

### EPR MATERIAL CATEGORIES

bcSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
BDL	001	BDL Beverage Containers	BDL Bev		Mass	
BDL	002	BDL Beverage Containers	BDL Bev	Aluminum can	Count	Alcohol only.
BDL	003	BDL Beverage Containers	BDL Bev	Non-aluminum can	Count	Alcohol only.
BDL	004	BDL Packaging	BDL Packaging		Mass	
BDL	005	BDL Packaging	BDL Packaging	Old corrugated cardboard (beer)	Yes / No	Beer/cider packaging only.
BDL	006	BDL Packaging	BDL Packaging	Old boxboard (beer)	Yes/No	Beer/cider packaging only.
BDL/ Encorp	007	BDL/Encorp Pacific Beverage Containers	BDL/Encorp Bev		Mass	
BDL/ Encorp	008	BDL/Encorp Pacific Beverage Containers	BDL/Encorp Bev	Glass 0 to 1 L (beer and cider)	Count	Alcohol only. Do not include non-alcoholic beverages in similar packaging (e.g., sodas). Take one photo of all items in this category per sample for documentation.
Encorp Pacific	009	Encorp Beverage Containers	Encorp Bev		Mass	
Encorp Pacific	010	Encorp Beverage Containers	Encorp Bev	Drink box 0 to 500 mL	Count	Only for beverages. No dairy or dairy substitutes.
Encorp Pacific	011	Encorp Beverage Containers	Encorp Bev	Drink box 501 mL to 1 L	Count	Only for beverages. No dairy or dairy substitutes.
Encorp Pacific	012	Encorp Beverage Containers	Encorp Bev	Gable-top 0 to 500 mL	Count	Only for beverages. No dairy or dairy substitutes.
Encorp Pacific	013	Encorp Beverage Containers	Encorp Bev	Gable-top 501 mL to 1 L	Count	Only for beverages. No dairy or dairy substitutes.
Encorp Pacific	014	Encorp Beverage Containers	Encorp Bev	Gable-top > 1 L	Count	Only for beverages. No dairy or dairy substitutes.
Encorp Pacific	015	Encorp Beverage Containers	Encorp Bev	Drink box (wine)	Count	Wine only.
Encorp Pacific	016	Encorp Beverage Containers	Encorp Bev	Bag in a box (wine)	Count	Wine only.

bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
Encorp Pacific	017	Encorp Beverage Containers	Encorp Bev	Plastic 0 to 1 L (alcohol)	Count	Alcohol only.
Encorp Pacific	018	Encorp Beverage Containers	Encorp Bev	Plastic > 1 L (alcohol)	Count	Alcohol only.
Encorp Pacific	019	Encorp Beverage Containers	Encorp Bev	Plastic drink pouches	Count	Only for beverages. No dairy or dairy substitutes.
Encorp Pacific	020	Encorp Beverage Containers	Encorp Bev	Plastic 0 to 1 L (non-alcohol)	Count	Only for beverages. No dairy or dairy substitutes.
Encorp Pacific	021	Encorp Beverage Containers	Encorp Bev	Plastic > 1 L (non-alcohol)	Count	Only for beverages. No dairy or dairy substitutes.
Encorp Pacific	022	Encorp Beverage Containers	Encorp Bev	Bi-metal 0 to 1 L	Count	Only for beverages. No dairy or dairy substitutes.
Encorp Pacific	023	Encorp Beverage Containers	Encorp Bev	Bi-metal > 1 L	Count	Only for beverages. No dairy or dairy substitutes.
Encorp Pacific	024	Encorp Beverage Containers	Encorp Bev	Glass > 1 L (beer and cider)	Count	Alcohol only. Do not include non-alcoholic beverages in similar packaging (e.g., sodas).
Encorp Pacific	025	Encorp Beverage Containers	Encorp Bev	Glass 0 to L (wine and spirits)	Count	Alcohol only. Do not include non-alcoholic beverages in similar packaging (e.g., sparkling juices).
Encorp Pacific	026	Encorp Beverage Containers	Encorp Bev	Glass > 1 L (wine and spirits)	Count	Alcohol only. Do not include non-alcoholic beverages in similar packaging (e.g., sparkling juices).
Encorp Pacific	027	Encorp Beverage Containers	Encorp Bev	Glass 0 to 1 L (non-alcohol)	Count	Only for beverages. No dairy or dairy substitutes.
Encorp Pacific	028	Encorp Beverage Containers	Encorp Bev	Glass > 1 L (non-alcohol)	Count	Only for beverages. No dairy or dairy substitutes.
RecycleBC	029	Newsprint	Newsprint		Mass	
RecycleBC	030	Newsprint	Newsprint	Newspapers	Yes/No	Daily and weekly newspapers, community newspapers, free newspapers and other newsprint publications. e.g. Globe and Mail, Star, Metro, Auto Trader, Condo Living, Real Estate News.

bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
RecycleBC	031	Newsprint	Newsprint	Newsprint flyers and inserts	Yes/No	Newsprint flyers and advertising distributed to households.
RecycleBC	032	Other Printed Paper	Other PP		Mass	
RecycleBC	033	Other Printed Paper	Other PP	Magazines and catalogues	Yes/No	Glossy magazines, catalogues, calendars, annual reports (i.e. stapled or glued).
RecycleBC	034	Other Printed Paper	Other PP	Directories and telephone books	Yes/No	Telephone books and other directories such as the Yellow Pages.
RecycleBC	035	Other Printed Paper	Other PP	Other printed paper	Yes/No	Writing paper, office paper, paper envelopes, calendars (purchased or promotional), bills and statements, ad mail, non-newsprint flyers and advertising and gift cards, non-foil gift wrap, cash register receipts, lottery tickets, posters, promotional postcards, sketch pads, notebooks. DO NOT INCLUDE: Soft or hard covered books and bound periodicals, reference books, literary and text books, and academic journals.
RecycleBC	036	RecycleBC Packaging	RecycleBC Packaging		Mass	
RecycleBC	037	RecycleBC Packaging	RecycleBC Packaging	Gable-top containers	Yes/No	Polycoat containers with a gable shaped top commonly used for milk and milk substitutes like soy, almond and rice milk, some foods, sugar, molasses, etc.
RecycleBC	038	RecycleBC Packaging	RecycleBC Packaging	Aseptic containers	Yes/No	Polycoat fibre and foil containers (e.g. Tetra Pak) commonly used for milk and milk substitutes like soy, almond and rice milk, soup, sauces, etc.
RecycleBC	039	RecycleBC Packaging	RecycleBC Packaging	Polycoat cups	Yes/No	Hot beverage/food containers, with polycoat on inside only, including coffee cups, soup cups/bowls, chili cups etc. Cold beverage/food containers with polycoat on both sides including fountain drinks, take-out ice cream cups.

bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
RecycleBC	040	RecycleBC Packaging	RecycleBC Packaging	Polycoat containers	Yes/No	Polycoat paper ice cream containers, typically with a lid, excluding boxboard folder ice cream boxes. Food containers with white fibre and a rolled or folded rim, such as Michelina's frozen food, KFC tubs.
RecycleBC	041	RecycleBC Packaging	RecycleBC Packaging	Paper laminate packaging and waxed corrugated cardboard	Yes/No	Paper with aluminum foil, paper with plastic, multi-layered paper. Microwave popcorn bags, some cookie bags, dog food bags, paper granola bar wrappers, laminated paper carry out bags, bags with bonded plastic or foil liners/layers/coatings. Waxed corrugated cardboard.
RecycleBC	042	RecycleBC Packaging	RecycleBC Packaging	Old corrugated cardboard (non-beer)	Yes/No	Micro-flute corrugated containers, pizza boxes, electronic product boxes such as television and computer boxes, boxes used to direct mail for residential consumers. Kraft paper bags and wrap, grocery or retail bags, potato bags, some pet food bags, including brown, white, and coloured kraft paper and bags.
RecycleBC	043	RecycleBC Packaging	RecycleBC Packaging	Boxboard/cores/molded pulp (non-beer)	Yes/No	Boxboard, paperboard commonly used for cereal boxes, shoe boxes, frozen food boxes, fast food and ice cream boxes, cartons such as fry/onion ring boxes, carrier boxes for soft drink containers. Cores from toilet paper/ paper towels/ gift wrap, etc. Molded pulp packaging commonly used for egg cartons, drink trays, other trays, molded pulp flower pots/trays, etc.
RecycleBC	044	RecycleBC Packaging	RecycleBC Packaging	#1 PET bottles and jars	Yes/No	#1 plastic bottles and jars commonly used for milk and milk substitutes, cooking oil, honey, dish soap, nuts, etc.
RecycleBC	045	RecycleBC Packaging	RecycleBC Packaging	#1 PET thermoform	Yes/No	#1 clamshells commonly used for bakery trays; pre-made fruit and salad packages. #1 egg cartons. #1

bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
						trays commonly used for single serve meals; deli and bakery items; house wares and hardware products. #1 cold drink cups.
RecycleBC	046	RecycleBC Packaging	RecycleBC Packaging	#2 HDPE bottles/jugs/containers	Yes/No	#2 plastic bottles and jugs commonly used for juice concentrate, milk and milk substitutes, laundry soap, shampoo, windshield washer fluid, personal care products, pharmaceuticals, vitamin and supplements containers.
RecycleBC	047	RecycleBC Packaging	RecycleBC Packaging	#5 PP bottles/jugs/jars	Yes/No	# 5 plastic bottles includes nutritional supplement drinks, shampoos, etc. NO TUBS
RecycleBC	048	RecycleBC Packaging	RecycleBC Packaging	Other rigid plastic packaging	Yes/No	#7 rigid containers. #2, #3, #4, #5, #6 (non-expanded) trays, pails, tubs and lids not listed in other categories. Rigid containers without SPI resin code.
RecycleBC	049	RecycleBC Packaging	RecycleBC Packaging	#6 PS expanded polystyrene	Yes/No	White and coloured. #6 foam take-out containers such as drink cups, egg cartons, take-out food clamshells, white packaging foam, coloured meat trays, etc.
RecycleBC	050	RecycleBC Packaging	RecycleBC Packaging	Film plastic (LDPE and HDPE packaging)	Yes/No	#2 HDPE & #4 LDPE film, dry cleaning bags, bread bags, frozen food bags, milk bags, toilet paper and paper towel over-wrap, lawn seed bags, grocery and retail carry-out bags. DO NOT INCLUDE: Garbage bags, kitchen catchers, Ziploc bags.
RecycleBC	051	RecycleBC Packaging	RecycleBC Packaging	Plastic laminate packaging	Yes/No	Laminated plastic film and bags including chip bags, vacuum sealed bags, cereal liners, candy wraps, pasta bags, boil in a bag, plastic based food pouches. Film plastic other than #2 HDPE and # 4LDPE including PLA, PHA, PHB. Other plastic packaging not listed in other categories. PE foam packaging. Blister packaging. PS foam peanut packaging.
RecycleBC	052	RecycleBC Packaging	RecycleBC Packaging	Steel food containers	Yes/No	Steel food cans commonly used for soups, beans, peaches, etc.



bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
						Bi-metal and spiral wound cans.
RecycleBC	053	RecycleBC Packaging	RecycleBC Packaging	Steel aerosol containers	Yes/No	Empty food and consumer product spray cans commonly used for cooking oil, whipped cream, etc.
RecycleBC	054	RecycleBC Packaging	RecycleBC Packaging	Aluminum food containers	Yes/No	Aluminum food cans commonly used for sardines and cat food, etc.
RecycleBC	055	RecycleBC Packaging	RecycleBC Packaging	Aluminum foil and foil trays	Yes/No	Aluminum foil wrap, pie plates, baking trays, etc.
RecycleBC	056	RecycleBC Packaging	RecycleBC Packaging	Aluminum aerosol containers	Yes/No	Aluminum aerosol containers commonly used for hair products, etc.
RecycleBC	057	RecycleBC Packaging	RecycleBC Packaging	Glass containers	Yes/No	Clear and coloured. Food containers commonly used for pickles, salsa, cosmetics, cooking oil, vinegar.
TSBC	058	Tires	Tires		Mass	
TSBC	059	Tires	Tires	Passenger and light truck	Count	Report all other tires to TSBC.
TSBC	060	Tires	Tires	Medium truck	Count	Report all other tires to TSBC.
TSBC	061	Tires	Tires	Agricultural	Count	Report all other tires to TSBC.
TSBC	062	Tires	Tires	Logger skidder	Count	Report all other tires to TSBC.
TSBC	063	Tires	Tires	Bicycle tires and tubes	Count	Report all other tires to TSBC.
TSBC	064	Tires	Tires	Other tires	Count	Report all other tires to TSBC.
BCUOMA	065	Oil and Antifreeze	Oil/Antifreeze		Mass	
BCUOMA	066	Oil and Antifreeze	Oil/Antifreeze	Lubricating oil	Count	Containers with product inside.
BCUOMA	067	Oil and Antifreeze	Oil/Antifreeze	Lubricating oil containers	Count	Empty containers only.
BCUOMA	068	Oil and Antifreeze	Oil/Antifreeze	Lubricating oil filters	Count	
BCUOMA	069	Oil and Antifreeze	Oil/Antifreeze	Antifreeze	Count	Containers with product inside.
BCUOMA	070	Oil and Antifreeze	Oil/Antifreeze	Antifreeze containers	Count	Empty containers only.
CBA	071	Lead-Acid Batteries	Lead-Acid Batteries		Mass	

bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
CBA	072	Lead-Acid Batteries	Lead-Acid Batteries	Lead-acid batteries	Count	Photograph all lead-acid batteries and drop at recycling location.
Call2 Recycle	073	Single Use/ Rechargeable < 5 kg	SU/R Batteries		Mass	
Call2 Recycle	074	Single Use/ Rechargeable < 5 kg	SU/R Batteries	Rechargeable batteries < 5 kg	Count	Nickel Cadmium, Lithium-Ion, Nickel Metal Hydride, Nickel Zinc. Return all batteries to Call2Recycle for further analysis.
Call2 Recycle	075	Single Use/ Rechargeable < 5 kg	SU/R Batteries	Primary/single use batteries < 5 kg	Count	Alkaline and Lithium. Return all batteries to Call2Recycle for further analysis.
Product Care	076	Paint/Pesticides/ Solvents/Gasoline	PPGS		Mass	
Product Care	077	Paint/Pesticides/ Solvents/Gasoline	PPGS	Flammable liquids	Count	Must have a flame symbol or phrase similar to "keep away from open spark or flame" on the label, e.g. paint thinners, camping fuel, kerosene etc.
Product Care	078	Paint/Pesticides/ Solvents/Gasoline	PPGS	Gasoline	Count	
Product Care	079	Paint/Pesticides/ Solvents/Gasoline	PPGS	Paint/coatings	Count	Containers with product interior & exterior, latex and oil based, consumer products only, non-industrial.
Product Care	080	Paint/Pesticides/ Solvents/Gasoline	PPGS	Paint containers	Count	Empty containers only.
Product Care	081	Paint/Pesticides/ Solvents/Gasoline	PPGS	Aerosol paint	Count	Containers with product all types including automotive and industrial.
Product Care	082	Paint/Pesticides/ Solvents/Gasoline	PPGS	Aerosol paint containers	Count	Empty containers only - all types including automotive and industrial.
Product Care	083	Paint/Pesticides/ Solvents/Gasoline	PPGS	Domestic pesticides	Count	Consumer pesticides that have both the poisonous (skull & cross bones) symbol and Pest Control Product (PCP) number.

bcSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
Product Care	084	Lighting Equipment	Lighting		Mass	
Product Care	085	Lighting Equipment	Lighting	Lights and lamps	Count	All bulb and tube technologies. e.g. CFLs, fluorescent tubes, incandescent bulbs, etc.
Product Care	086	Lighting Equipment	Lighting	Lighting fixtures	Count	Examples: Table lamp, chandelier, flashlight, wall fixture, etc.
Product Care	087	Lighting Equipment	Lighting	Lighting ballasts	Count	
Product Care	088	Alarms	Alarms		Mass	
Product Care	089	Alarms	Alarms	Smoke alarms	Count	
Product Care	090	Alarms	Alarms	Carbon monoxide alarms	Count	
EPRA	091	Electronics	Electronics		Mass	
EPRA	092	Electronics	Electronics	Desktop computers and servers	Count	
EPRA	093	Electronics	Electronics	Notebook and laptop computers	Count	Portable computers, excludes handheld devices.
EPRA	094	Electronics	Electronics	Computer peripherals	Count	Including but not limited to mouse, keyboard, external hard drives.
EPRA	095	Electronics	Electronics	Computer monitors	Count	
EPRA	096	Electronics	Electronics	Desktop printers/scanners/copiers/ fax machines	Count	Desktop devices only.
EPRA	097	Electronics	Electronics	Handheld computing devices	Count	Examples: tablets, ebook readers.
EPRA	098	Electronics	Electronics	Floor standing printers/scanners/copiers	Count	Floor standing devices only.
EPRA	099	Electronics	Electronics	Televisions	Count	
EPRA	100	Electronics	Electronics	Consumer audio/video equipment	Count	Including, without limitation, radio sets, cameras and video recorders designed for non-professional use, projectors, audio players, recorders, headphones, microphones, amplifiers, equalizers and speakers, DVD players, cable boxes. DO NOT INCLUDE

bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
						PROFESSIONAL EQUIPMENT.
EPRA	101	Electronics	Electronics	Other audio/video equipment	Count	Accessories and cords to audio/video equipment, audio/visual equipment for professional use.
EPRA	102	Electronics	Electronics	Non-cellular telephones/ answering systems	Count	Corded and cordless telephones and answering systems for consumer use.
EPRA	103	Electronics	Electronics	Commercial telephones/ telecommunication s equipment	Count	Corded and cordless telephones, answering systems, telecommunications equipment for commercial use such as office phone systems and, teleconferencing systems.
EPRA	104	Electronics	Electronics	Electric typewriters/telex/ computer terminals	Count	Electric typewriters, telex machines, computer terminals or systems. DO NOT INCLUDE DESKTOP COMPUTERS.
EPRA	105	Electronics	Electronics	Pocket and desk calculators	Count	
EPRA	106	Electronics	Electronics	Network and telecommunication s equipment	Count	Examples: modems, switches, routers.
EPRA	107	Electronics	Electronics	Storage devices and media	Count	Devices, equipment or media for collecting, storing, processing, presenting or communicating information, including, without limitation, sounds and images.
EPRA	108	Electronics	Electronics	Other electronics	Count	Other electronic or electrical information technology or telecommunication devices, equipment or media not listed in other categories.
EPRA	109	Electronics	Electronics	Electronic musical instruments and equipment	Count	
EPRA	110	Electronics	Electronics	Electronic medical equipment	Count	
EPRA	111	Electronics	Electronics	Monitoring and control instruments	Count	Electronic or electrical monitoring and control instruments, including, alarm systems, devices for measuring, weighing or adjusting, but not including thermostats or smoke detectors.

bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
EPRA	112	Electronics	Electronics	Electric toys (ride on)	Count	
EPRA	113	Electronics	Electronics	Electric toys (non-ride on)	Count	
Recycle My Cell	114	Mobile Devices	Mobile Devices		Mass	
Recycle My Cell	115	Mobile Devices	Mobile Devices	Mobile devices	Count	Mobile devices designed primarily to connect to a cellular or paging network, including, without limitation, mobile phones, smartphones (iPhone, android, blackberry etc.), cellular personal digital assistants and pagers
HRAI	116	Heating/Ventilation/ Air Conditioning/ Refrigeration/ Plumbing Products	HVAC/Refrig/Plumb		Mass	
HRAI	117	Heating/Ventilation/ Air Conditioning/ Refrigeration/ Plumbing Products	HVAC/Refrig/Plumb	Heating products	Count	Examples: residential furnaces (all types), commercial furnaces (all types), residential boilers (all types), commercial boilers (all types), unit heaters (all types), heat pumps, direct heating equipment, infrared heaters, commercial-industrial forced-air heating equipment
HRAI	118	Heating/Ventilation/ Air Conditioning/ Refrigeration/ Plumbing Products	HVAC/Refrig/Plumb	Cooling products	Count	Examples: residential condenser units, commercial-industrial forced-air heating equipment, HP/AC ductless coils, electrical horizontal single package cooling electrical, gas/electrical single package heat and cool, split system condensing units, geothermal heat pumps, water-source heat pumps, packaged terminal products, automatic commercial ice makers, mobile refrigeration equipment, datacom cooling, chilled beams, humidifiers, dehumidifiers, heat pump pool and spa heaters, thermal storage
HRAI	119	Heating/Ventilation/ Air	HVAC/Refrig/Plumb	Chillers	Count	

bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
		Conditioning/ Refrigeration/ Plumbing Products				
HRAI	120	Heating/Ventilation/ Air Conditioning/ Refrigeration/ Plumbing Products	HVAC/Refrig/ Plumb	Commercial refrigeration	Count	Examples: commercial freezers, commercial coolers, commercial refrigerators, display cases, reach-ins, walk-ins
HRAI	121	Heating/Ventilation/ Air Conditioning/ Refrigeration/ Plumbing Products	HVAC/Refrig/ Plumb	Plumbing	Count	Examples: Water heaters with a tank, tankless water heaters, fluid pumps, water softeners, UV disinfection systems, hydronic systems and control
HRAI	122	Thermostats	Thermostats		Mass	
HRAI	123	Thermostats	Thermostats	Thermostats (non-mercury containing)	Count	
HRAI	124	Thermostats	Thermostats	Other thermostats	Count	
OPEIC	125	Outdoor Power Equipment	Out Pwr Equip		Mass	
OPEIC	126	Outdoor Power Equipment	Out Pwr Equip	Electric powered	Count	Hand-held, walk-behind and free-standing electric outdoor power equipment, e.g. chain saw, lawn mower, pressure washer, snowblower, etc.
CESA	127	Small Appliances and Power Tools	Sm Appl and PT		Mass	
CESA	128	Small Appliances and Power Tools	Sm Appl and PT	Full size floor and carpet care appliances	Count	
CESA	129	Small Appliances and Power Tools	Sm Appl and PT	Smaller floor/surface cleaning appliances	Count	
CESA	130	Small Appliances and Power Tools	Sm Appl and PT	Garment care appliances	Count	Including, without limitation, irons and garment steamers.
CESA	131	Small Appliances and Power Tools	Sm Appl and PT	Kitchen countertop - motorized appliances	Count	

bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
CESA	132	Small Appliances and Power Tools	Sm Appl and PT	Kitchen countertop - heating appliances (non-coffee/tea)	Count	
CESA	133	Small Appliances and Power Tools	Sm Appl and PT	Kitchen countertop - heating appliances (coffee/tea)	Count	
CESA	134	Small Appliances and Power Tools	Sm Appl and PT	Time measurement and display devices	Count	
CESA	135	Small Appliances and Power Tools	Sm Appl and PT	Personal care appliances	Count	Including, without limitation, hair cutting and drying appliances, tooth care appliances, shavers, and massagers.
CESA	136	Small Appliances and Power Tools	Sm Appl and PT	Weight measurement	Count	
CESA	137	Small Appliances and Power Tools	Sm Appl and PT	Air treatment appliances	Count	
CESA	138	Small Appliances and Power Tools	Sm Appl and PT	Desk and tabletop fans	Count	
CESA	139	Small Appliances and Power Tools	Sm Appl and PT	Microwaves	Count	
CESA	140	Small Appliances and Power Tools	Sm Appl and PT	Test and measurement tools	Count	
CESA	141	Small Appliances and Power Tools	Sm Appl and PT	Handheld power tools	Count	
CESA	142	Small Appliances and Power Tools	Sm Appl and PT	Bench-top/demolition/free-standing power tools	Count	
CESA	143	Small Appliances and Power Tools	Sm Appl and PT	Sewing/textile machines	Count	

bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
CESA	144	Small Appliances and Power Tools	Sm Appl and PT	Designated very small items	Count	Examples: Stud finder, glue gun, bike speedometer, etc.
CESA	145	Small Appliances and Power Tools	Sm Appl and PT	Exercise machines	Count	Examples: Treadmill, elliptical, cycling machine, vibration machine, etc.
CESA	146	Small Appliances and Power Tools	Sm Appl and PT	Sports/leisure/arts/crafts/hobby devices	Count	Examples: Inflator (for airbeds), mosquito lantern, laser caddie/sport rangefinder, airbrush, scrapbooking machines, mandrel, etc.
MARR	147	Major Household Appliances	Mj HH Appl		Mass	
MARR	148	Major Household Appliances	Mj HH Appl	Full size refrigerators/wine coolers/beverage centres	Count	
MARR	149	Major Household Appliances	Mj HH Appl	Compact refrigerators/wine coolers/beverage centres	Count	
MARR	150	Major Household Appliances	Mj HH Appl	Freezers	Count	
MARR	151	Major Household Appliances	Mj HH Appl	Room air conditioners	Count	
MARR	152	Major Household Appliances	Mj HH Appl	Portable air conditioners	Count	
MARR	153	Major Household Appliances	Mj HH Appl	Dehumidifiers	Count	
MARR	154	Major Household Appliances	Mj HH Appl	Clothes washers	Count	
MARR	155	Major Household Appliances	Mj HH Appl	Clothes dryers	Count	
MARR	156	Major Household Appliances	Mj HH Appl	Ranges	Count	
MARR	157	Major Household Appliances	Mj HH Appl	Range hoods and downdrafts	Count	



bciSteward	#	Primary	Primary Shorthand	Secondary	Measure	Description and Instructions
MARR	158	Major Household Appliances	Mj HH Appl	Built-in ovens	Count	
MARR	159	Major Household Appliances	Mj HH Appl	Built-in and over the range microwave ovens	Count	
MARR	160	Major Household Appliances	Mj HH Appl	Surface cooking units	Count	
MARR	161	Major Household Appliances	Mj HH Appl	Dishwashers	Count	
MARR	162	Major Household Appliances	Mj HH Appl	Food waste disposers	Count	
MARR	163	Major Household Appliances	Mj HH Appl	Trash compactors	Count	
MARR	164	Major Household Appliances	Mj HH Appl	Electric water dispensers	Count	
HPSA	165	Medications	Medications		Mass	
HPSA	166	Medications	Medications	Prescription drugs	Count	Product only. Send Medications to HPSA for destruction.
HPSA	167	Medications	Medications	Over-the-counter	Count	Product only. Send Medications to HPSA for destruction.
HPSA	168	Medications	Medications	Natural health products	Count	Product only. Send Medications to HPSA for destruction.
N/A	169	Non-EPR Products	Non-EPR		Not applicable	All other materials.

## APPENDIX D

### DISTRICT OF SQUAMISH RESULTS

Category	SF	MF	ICI	C&D	STR
<b>Number of Samples</b>	<b>8</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>4</b>
<b>01. Paper</b>	<b>16.6%</b>	<b>19.8%</b>	<b>26.6%</b>	<b>2.9%</b>	<b>18.9%</b>
01.Paper - refundable	0.1%	0.2%	0.1%	0.0%	0.3%
02.Paper - recyclable	3.5%	7.4%	5.8%	2.5%	3.4%
03.Paper - compostable	10.3%	7.2%	15.9%	0.0%	8.2%
04.Paper - other/non-Recycle BC	1.1%	3.0%	1.5%	0.4%	1.3%
05.Paper Bags	0.0%	0.1%	0.1%	NA	0.2%
06.Single-use Cups (Poly-coat Paper)	0.4%	0.8%	1.6%	NA	1.5%
07.Takeout Containers (Plastic Lined Paper)	0.3%	0.3%	0.7%	NA	1.5%
47.Paper Cups Labelled Compostable <sup>i</sup>	0.0%	0.1%	0.1%	NA	0.6%
48.Paper Takeout Labelled Compostable <sup>i</sup>	0.8%	0.7%	0.7%	NA	2.1%
<b>02. Plastic</b>	<b>20.7%</b>	<b>19.4%</b>	<b>19.2%</b>	<b>8.8%</b>	<b>12.3%</b>
08.Plastic - refundable	0.3%	0.8%	0.8%	0.2%	1.0%
09.Plastic - rigid packaging	3.0%	1.8%	3.0%	1.0%	2.2%
10.Plastic - durable products	2.8%	3.9%	1.9%	5.6%	1.0%
11.Plastic - styrofoam	0.8%	0.9%	0.9%	0.0%	0.2%
12.Plastic - film packaging	1.4%	1.6%	1.7%	0.4%	0.8%
13.Plastic - flex packaging	5.5%	2.4%	4.0%	0.0%	2.1%
14.Plastic - film products	4.8%	6.3%	4.0%	1.5%	1.1%
15.Re-used Plastic Bags	0.9%	0.4%	0.5%	NA	0.7%
16.Empty Plastic Bags	0.4%	0.1%	0.3%	NA	0.3%
17.Plastic Bags Labelled Compostable or Biodegradable	0.1%	0.1%	0.2%	NA	0.1%
18.Single-use Cups (Plastic)	0.1%	0.3%	0.6%	NA	0.7%
19.Foam Single-use Cups	0.0%	0.0%	0.0%	NA	0.1%
20.Single-use Cups Labelled Compostable or Biodegradable	0.0%	0.1%	0.0%	NA	0.5%
21.Takeout Containers (Plastic)	0.2%	0.2%	0.7%	NA	0.7%
22.Foam Takeout Containers	0.0%	0.0%	0.1%	NA	0.1%
23.Takeout Containers Labelled Compostable or Biodegradable	0.1%	0.1%	0.2%	NA	0.5%
24.Single-use Straws	0.1%	0.1%	0.1%	NA	0.1%
25.Single-use Utensils	0.1%	0.1%	0.1%	NA	0.4%
<b>03. Metal</b>	<b>4.0%</b>	<b>4.2%</b>	<b>3.0%</b>	<b>3.5%</b>	<b>3.2%</b>
26.Metal - refundable	0.3%	1.0%	0.6%	0.0%	1.9%
27.Metal - recyclable	1.3%	0.6%	1.9%	0.0%	0.9%
28.Metal - non-Recycle BC	2.5%	2.6%	0.5%	3.4%	0.4%
<b>04. Glass</b>	<b>3.8%</b>	<b>4.3%</b>	<b>3.9%</b>	<b>0.3%</b>	<b>4.5%</b>
29.Glass - refundable	1.2%	2.4%	1.6%	0.0%	2.7%

Category	SF	MF	ICI	C&D	STR
30.Glass - recyclable	1.5%	0.9%	1.2%	0.0%	1.2%
31.Glass - non-Recycle BC	1.1%	1.0%	1.2%	0.3%	0.6%
<b>05. Organics</b>	<b>24.3%</b>	<b>36.5%</b>	<b>28.4%</b>	<b>41.0%</b>	<b>24.0%</b>
32.Organics - yard waste	0.9%	1.5%	1.3%	0.2%	2.0%
33.Organics - avoidable food waste	10.3%	16.6%	15.2%	0.0%	14.4%
34.Organics - unavoidable food waste	8.5%	5.5%	8.1%	0.0%	7.1%
35.Organics - non-compostable	1.9%	1.3%	0.4%	0.0%	0.2%
36.Organics - compostable wood	0.5%	0.9%	0.5%	15.3%	0.3%
37.Organics - co-gen wood	1.6%	10.3%	0.0%	13.2%	0.0%
38.Organics - landfill wood	0.6%	0.3%	2.7%	12.3%	0.0%
<b>06. Building Material</b>	<b>3.7%</b>	<b>5.3%</b>	<b>1.2%</b>	<b>14.7%</b>	<b>0.3%</b>
39.Building Material	3.7%	5.3%	1.2%	NA	0.3%
39A.Carpet Waste (and underlay)	NA	NA	NA	1.0%	NA
39B.Gypsum/drywall plaster	NA	NA	NA	1.7%	NA
39C.Masonry (bricks, blocks, concrete, etc.)	NA	NA	NA	4.9%	NA
39D.Other Inorganics (linoleum, etc.)	NA	NA	NA	0.1%	NA
39E.Rigid asphalt products	NA	NA	NA	6.7%	NA
39F.Rock, sand, dirt, ceramic, porcelain	NA	NA	NA	0.1%	NA
<b>07. Electronic Waste</b>	<b>1.2%</b>	<b>0.3%</b>	<b>1.2%</b>	<b>0.1%</b>	<b>0.1%</b>
40.Electronic Waste	1.2%	0.3%	1.2%	0.1%	0.1%
<b>08. Household Hazardous Waste</b>	<b>2.9%</b>	<b>0.8%</b>	<b>0.9%</b>	<b>1.4%</b>	<b>1.0%</b>
41.Household Hazardous Waste - EPR	2.6%	0.3%	0.2%	1.4%	0.8%
42.Household Hazardous Waste - non-EPR	0.3%	0.5%	0.7%	0.0%	0.2%
<b>09. Household Hygiene</b>	<b>12.6%</b>	<b>3.7%</b>	<b>5.8%</b>	<b>0.0%</b>	<b>33.6%</b>
43.Household Hygiene	12.6%	3.7%	5.8%	0.0%	33.6%
<b>10. Bulky Objects</b>	<b>1.6%</b>	<b>0.4%</b>	<b>5.9%</b>	<b>0.3%</b>	<b>0.6%</b>
44.Bulky Objects	1.6%	0.4%	5.9%	0.3%	0.6%
<b>11. Textiles</b>	<b>6.3%</b>	<b>4.4%</b>	<b>2.7%</b>	<b>0.3%</b>	<b>1.0%</b>
45.Textiles	6.3%	4.4%	2.7%	0.3%	1.0%
<b>12. Fines</b>	<b>2.3%</b>	<b>0.8%</b>	<b>1.2%</b>	<b>0.6%</b>	<b>0.6%</b>
46.Fines	2.3%	0.8%	1.2%	0.6%	0.6%
<b>13. Bagged Garbage</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>26.1%</b>	<b>NA</b>
49. Bagged Garbage	NA	NA	NA	26.1%	NA

<sup>i</sup> Category was added to the category list after the waste composition study had commenced.

## APPENDIX E

### PHOTOS

**Sorting Set-up at Squamish Landfill**



**Sorting Set-up at Squamish Landfill**



**Sorting Set-up at Squamish Landfill**



**Example SF Sample (SF-01)**



**Example MF Sample (MF-04)**



**Example ICI Sample (SLRD-02)**



**Example STR Sample (STR-02)**



**Example C&D Sample (SLRD-02)**



**Paper-Compostable**



**Household Hygiene**



**Plastic Refundable Containers**



**Avoidable Food Waste**





### Unavoidable Food Waste



### Plastic Flex Packaging



### Durable Plastic Products



### Yard Waste and Textiles



## APPENDIX F

### LIMITATIONS ON THE USE OF THIS DOCUMENT

# LIMITATIONS ON USE OF THIS DOCUMENT

## GEOENVIRONMENTAL

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