2012 Commercial and Self-Haul Waste Streams Composition Study
Final Report

Seattle Public Utilities

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in cooperation with
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1 Overview

1.1 Introduction and Background

Seattle Public Utilities (SPU) provides for the collection, transfer, and disposal of municipal solid waste (MSW) from within the City of Seattle. As part of this responsibility, SPU designs and implements programs that help the City meet its goal to achieve a 60% recycling rate by 2015, and 70% recycling rate by 2022. To better understand the types and quantities of MSW disposed, and to assess the city's recycling potential, SPU has conducted composition studies every two years since 1988. The 1988 study included the city's entire waste stream, and each subsequent study has analyzed two of the city's three waste streams (residential, commercial, and self-haul) so that every stream is sampled once every four years. Table 1-1 shows the number of waste samples sorted from these three waste streams from 1988 through the current study in 2012.

Table 1-1. Samples per Study Period, by Substream

Year	Commercial	Residential	Self-Haul	Total
1988-89	121	212	217	550
1990	0	114	203	317
1992	251	0	197	448
1994-95	0	368	0	368
1996	348	0	199	547
1998-99	0	360	0	360
2000	347	0	200	547
2002	0	309	0	309
2004	270	0	216	486
2006	0	356	0	356
2008	271	0	216	487
2010	0	361	0	361
2012	259	0	226	476

All of these studies share the following three objectives:

- Obtaining information about the City's residential, commercial, and self-haul waste substreams in order to estimate the recycling potential for each;
- Understanding differences among these three substreams so that targeted recycling programs can be designed, implemented, and monitored for each; and
- Establishing a baseline for continued, long-term measurement of system performance.

This report, which consists of six sections, presents the results of the 2012 commercial and self-haul waste study. This section, Section 1, briefly introduces the project and the methodology, and Section 2 summarizes the study's findings. In Sections 3 and 4, the 2012 commercial and self-haul findings are compared with those from the 1988/89, 1992, 1996, 2000, 2004, and 2008 study periods.[1] Detailed results of the 2012 commercial and self-haul waste composition study are presented in Section 5 and Section 6, respectively. Appendices follow the main body of the

[1] The self-haul substream was sampled in 1990, while the commercial substream was not. Therefore, self-haul results are compared across seven studies, and commercial results are compared across six.

report and provide material definitions, detailed study methodology, comments on sampling events, waste composition calculations, year-to-year comparison calculations, and copies of field forms.

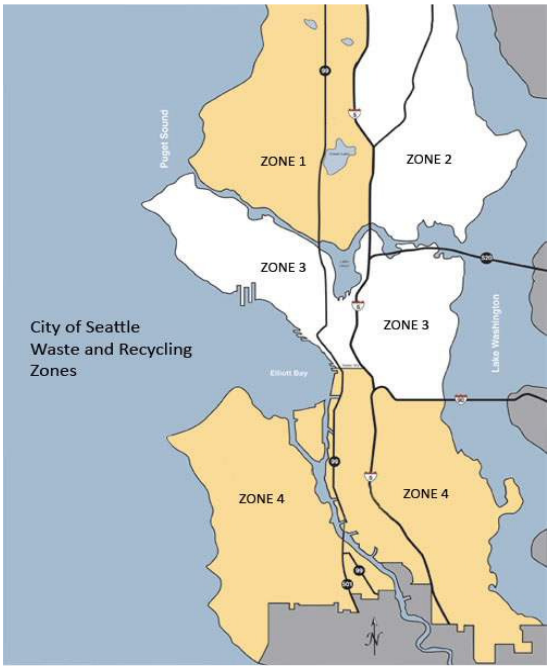
1.2 Seattle's Commercial and Self-haul Waste Substreams

For any specific geographic area, the total waste stream is composed of various substreams. A substream is determined by the particular generation, collection, or composition characteristics that make it a unique portion of the total waste stream. This study targets two of three main substreams in Seattle: the commercial and self-haul substreams.[2] These are described in detail below.

1.2.1 Commercial Substream

The **commercial** substream is waste that is: a) generated at businesses and institutions; and, b) collected by contracted hauling companies. In Seattle, all materials are collected by two contracted haulers, each serving two of four distinct "zones" (Figure 1-1) in the city.[3] One of the contracted haulers handles zones one and four, and the other hauler handles zones two and three.[4]

Figure 1-1. Seattle's Collection Zones



[2] The residential substream was not included in this study. For the most recent analysis of Seattle's residential waste stream, please see the 2010 Residential Waste Stream Composition Study at http://www.seattle.gov/util/Documents/Reports/SolidWasteReports/CompositionStudies/index.htm

[3] In 2010, the City of Seattle was divided into four "zones" rather than the two service areas (North and South) previously studied.

[4] Through the Clear Alleys Program, commercial waste from select downtown neighborhoods is collected in bags. This waste was excluded from the study due to the difficulty of segregating and obtaining representative samples of this material and since it represents a small portion (about 3% in 2011 tons) of Seattle's commercial waste.

1.2.2 Self-haul Substream

The **self-haul** substream is made up of waste that is: a) generated at residences as well as businesses and institutions; and, b) hauled by the household or business that generated the waste. All self-haul waste included in the study is disposed at one of two City-owned disposal stations: North or South Recycling and Disposal Stations (NRDS or SRDS).

1.3 Study Methodology

The following section provides an overview of the 2012 study methodology. As shown, there were four major steps involved in conducting this waste composition study. The steps are presented according to the order in which they occurred during the course of the study. Please see Appendix B for a detailed description of the methodology.

Step 1: Develop Sampling Plan

- A total 270 Commercial samples were allocated across zones, shifts and vehicle types using the following process:
  - Of the 270 total samples, 90 were assigned to the night shift and distributed among the four zones and vehicle types based on 2011 tonnage data.
  - The remaining 180 samples were allocated to the day shift in each of the four zones in order to achieve an even distribution of samples across the four zones. Within each zone samples were then assigned to vehicle types, based on the tonnage delivered by each in 2011.
- Self-haul samples were evenly allocated to each Recycling and Disposal Station, 108 to the North and 108 to the South.
- A sampling schedule was constructed for the 2012 calendar year so that 30 days of sampling, split between 18 days of commercial and 12 days of self-haul, were scheduled every other month. Working around major holidays and the sorting crew's availability, sampling days were randomly selected to assure a representative distribution across the days of the week and weeks of the month.
- A complete list of Seattle's commercial collection routes was assembled in conjunction with the City's contracted waste haulers.

Step 2: Schedule and Collect Waste Samples

Commercial:

- Prior to each sampling event, commercial collection routes were randomly selected from each stratum.
- The haulers were sent a list of routes chosen for each sampling day. Drivers collected waste from designated routes and delivered them to the appropriate transfer station for sampling.

Self-haul:

- Vehicles were systematically selected for sampling using a pre-determined frequency based on expected transfer station traffic for each sampling day.

Step 3: Capture and Sort Samples

Commercial:

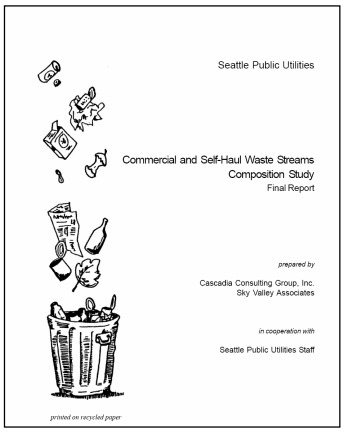
- As each selected commercial vehicle entered the facility, the sampling crew supervisor verified information with the driver about the waste collected, and asked the driver to dump the load in a specified location. The supervisor then directed the front loader operator to extract a 250 pound sample of waste and place it on a tarpaulin for sorting. Sample extraction methods varied by facility.

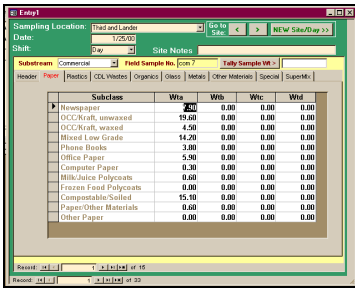
Self-haul:

- The sampling crew supervisor worked with selected self-haul drivers to unload their waste onto a tarpaulin. Samples from large (greater than 250 pounds) self-haul loads were either sorted in their entirety or the sampling crew selected a portion of the load to sort. If the load was less than 250 pounds, then the next vehicle of the same generator group (residential or non-residential) was also selected so that the weight of the two samples together equaled at least 250 pounds.
- For this study, a total of 259 commercial and 226 self-haul samples were sorted into 113 distinct component categories, such as *office paper* or *PET bottles*. (Since the 2008 study, several component categories were split. Please see Table 1-2 for an overview of how component categories have changed.)

Step 4: Analyze Data and Prepare Report

- Following each sampling event, all sorting data were entered into a customized database and reviewed for data entry errors.
- At the conclusion of the study, waste composition estimates were calculated by aggregating sampling data using a *weighted average* procedure. SPU and haulers provided 2012 waste tonnage data estimates that were used to perform final calculations. The weighted average procedure is detailed in Appendix D.
- Once the data were analyzed, an accompanying report was prepared.





1.3.1 Changes in Waste Component Categories

Several changes were made to the list of components included in the 2012 study. These changes were made to reflect changes in the waste stream, recycling industry, and disposal regulations; and to increase material specificity and worker safety.

A total of 113 components were included in this study, a net increase of 21 components compared to the list of 92 that was used in the 2008 study. As detailed in Table 1-2, some of the increase is due to individual components from the 2008 list that were separated into two or more

components. For a description of all of the changes to the component list, reference Table A-1 in Appendix A.

Table 1-2. Changes to Waste Component Categories Since 2008

2008 Broad Material Category: Component	2012 Broad Material Category: Component
Paper: OCC/Kraft Paper	Paper: OCC/Kraft Paper Paper: Grocery/Shopping Bags
Paper: Mixed/Low Grade	Paper: Mixed/Low Grade Paper: Polycoated Containers
Plastic: Clean Polyethylene Film	Plastic: Clean Polyethylene Film Plastic: Stretch Wrap
Glass: Flat Glass Glass: Other Glass	Glass: Flat Glass Glass: Other Glass Glass: Automotive Glass
Construction Debris: Carpet	Construction Debris: Carpet Construction Debris: Felt Carpet Pad
Construction Debris: Rock/Concrete/Bricks	Construction Debris: Concrete Construction Debris: Asphalt Paving Construction Debris: Other Aggregates Construction Debris: Rock
New Construction Debris Categories in 2012	Construction Debris: Single-Ply Roofing Membranes Construction Debris: Ceiling Tiles
New Potentially Harmful Waste Category in 2012	Potentially Harmful Waste: Rechargeable Batteries

2 Summary of Year 2012 Sampling Results

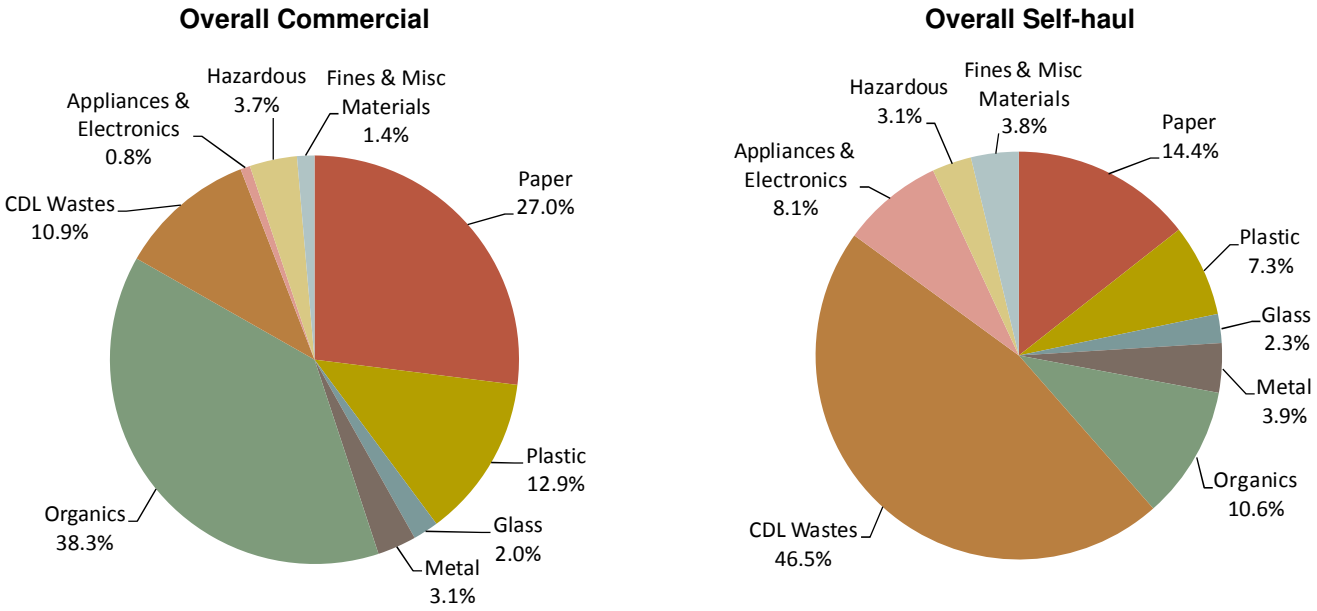
In 2012, the waste samples were sorted into nine broad material categories: **paper**, **plastic**, **glass**, **metal**, **organics**, **appliances & electronics**, **CDL wastes** (construction, demolition, and landclearing debris), **hazardous waste**, and **fines and miscellaneous materials**. Each broad material category was then sorted into various components such as *newspaper* or *PET plastic bottles*. A total of 113 components were included in this study.

Composition results are presented in the following order in this report. First, a pie chart reflects the composition percentages of the nine broad material categories. A table that lists the top ten components, by weight, follows the pie charts. Lastly, a table depicting the full composition results of all 113 components is presented.[5] Weighted averages were used to calculate composition estimates for the commercial and self-haul substreams. Please see Appendix D for more detail regarding these calculations.

Figure 2-1 summarizes the composition results. As shown, **paper** and **organics** together accounted for more than 65% of the commercial tonnage, while **CDL wastes** composed nearly half of the self-haul waste. **CDL wastes** include components such as *clean dimensional lumber*, *concrete*, and *demo gypsum scrap*.

[5] All waste composition results were derived using a 90% confidence level. This means that there is a 90% certainty that the actual composition is within the calculated range. In charts throughout this report, the values graphed represent the mean component percentage, not the range.

Figure 2-1. Overview of Composition Estimates: by Substream
(January – December 2012)



2.1 Overall Commercial Substream

A total of 259 loads were sampled from the commercial substream between January and December 2012. The commercial substream disposed of 134,089 tons of waste during the 2012 calendar year. The composition estimates for this substream were applied to the 134,089 tons to estimate the amount of waste disposed for each component.

The top ten components disposed in the commercial substream are listed in Table 2-1. When summed, they accounted for nearly 66% of the overall commercial tonnage. Accounting for nearly 30%, *food* stood out as the largest single component of the commercial substream. *Compostable/soiled paper*, *other film*, and *mixed/other paper* were large components (each more than 5%, by weight) of this substream as well. Table 2-2 lists the composition percentages, by weight, of each component in the overall commercial substream.

Table 2-1. Top Ten Components: Overall Commercial
(January – December 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Food	29.8%	29.8%	40,004
Compostable/Soiled	7.4%	37.3%	9,984
Other Film	6.3%	43.5%	8,407
Mixed/Other Paper	5.2%	48.8%	7,039
Mixed Low-grade Paper	4.6%	53.4%	6,193
Medical Wastes	3.2%	56.6%	4,316
Plain OCC/Kraft	2.9%	59.5%	3,868
Disposable Diapers	2.0%	61.6%	2,734
Non-Comp. Single-use Food Service	1.9%	63.5%	2,611
High-grade Paper	1.9%	65.5%	2,606
Total	**65.5%**		**87,763**

Table 2-2. Composition by Weight: Overall Commercial
(January – December 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**27.0%**		**36,145**
Newspaper	1.5%	0.4%	2,043
Plain OCC/Kraft	2.9%	0.5%	3,868
Waxed OCC	0.6%	0.3%	797
Grocery/Shopping Bags	0.4%	0.1%	540
High-grade Paper	1.9%	0.6%	2,606
Mixed Low-grade Paper	4.6%	0.5%	6,193
Polycoated Containers	0.1%	0.0%	136
Compostable/Soiled	7.4%	0.8%	9,984
Pot. Comp. Single-use Food Service	0.2%	0.1%	327
Non-Comp. Single-use Food Service	1.9%	0.3%	2,611
Mixed/Other Paper	5.2%	0.9%	7,039
Plastic	**12.9%**		**17,282**
#1 PET Bottles	0.7%	0.1%	940
#2 HDPE Natural Bottles	0.3%	0.1%	427
#2 HDPE Colored Bottles	0.2%	0.1%	290
Other Bottles	0.0%	0.0%	54
Tubs	0.7%	0.1%	889
Expanded Poly. Non-food	0.2%	0.1%	316
Expanded Poly. Food-grade	0.1%	0.0%	174
Rigid Poly. Foam Insulation	0.0%	0.0%	12
Pot. Comp. Single-use Food Service	0.0%	0.0%	45
Non-Comp. Single-use Food Service	0.7%	0.1%	960
Other Rigid Packaging	0.5%	0.1%	704
Shopping/Dry Cleaning Bags	0.0%	0.0%	59
Stretch Wrap	0.5%	0.2%	621
Clean Polyethylene Film	0.2%	0.1%	218
Other Film	6.3%	0.9%	8,407
Plastic Pipe	0.1%	0.1%	92
Foam Carpet Padding	0.0%	0.0%	7
Durable Plastic Products	1.1%	0.3%	1,433
Plastic/Other Materials	1.2%	0.3%	1,635
Glass	**2.0%**		**2,716**
Clear Bottles	0.6%	0.1%	860
Green Bottles	0.4%	0.1%	474
Brown Bottles	0.4%	0.1%	570
Container Glass	0.0%	0.0%	51
Fluorescent Tubes	0.0%	0.0%	3
CFLs	0.0%	0.0%	6
Flat Glass	0.2%	0.2%	247
Automotive Glass	0.0%	0.0%	0
Other Glass	0.4%	0.3%	505
Metal	**3.1%**		**4,112**
Aluminum Beverage Cans	0.4%	0.1%	508
Aluminum Foil/Containers	0.2%	0.1%	230
Other Aluminum	0.0%	0.0%	21
Other Nonferrous	0.1%	0.1%	108
Steel Food Cans	0.4%	0.1%	572
Empty Aerosol Cans	0.1%	0.0%	124
Other Ferrous	1.3%	0.4%	1,732
Oil filters	0.0%	0.0%	36
Mixed Metals/Material	0.6%	0.2%	781
Organics	**38.3%**		**51,359**
Leaves and Grass	1.2%	0.4%	1,571
Prunings	0.0%	0.0%	25
Food	29.8%	2.5%	40,004
Fats, Oils, Grease	0.1%	0.1%	111
Textiles/Clothing	1.4%	0.4%	1,852
Mixed Textiles	1.7%	0.8%	2,281
Disposable Diapers	2.0%	0.8%	2,734
Animal By-products	1.1%	0.5%	1,520
Rubber Products	0.9%	0.3%	1,147
Tires	0.1%	0.1%	115

	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**0.8%**		**1,057**
Furniture	0.3%	0.2%	433
Mattresses	0.0%	0.0%	50
Small Appliances	0.1%	0.1%	157
Cell Phones	0.0%	0.0%	0
Audio/Visual Equipment	0.1%	0.1%	119
CRT Monitors	0.0%	0.0%	55
CRT Televisions	0.0%	0.1%	42
Other Electronics	0.1%	0.1%	200
CDL Wastes	**10.9%**		**14,573**
Clean Dimension Lumber	1.0%	0.3%	1,293
Clean Engineered Wood	0.9%	0.5%	1,162
Pallets	1.5%	0.8%	2,049
Crates	0.3%	0.3%	408
Other Untreated Wood	0.1%	0.1%	74
New Painted Wood	0.4%	0.2%	556
Old Painted Wood	0.2%	0.2%	251
Creosote-treated Wood	0.3%	0.4%	348
Other Treated Wood	0.2%	0.1%	290
Contaminated Wood	1.6%	0.8%	2,183
New Gypsum Scrap	0.0%	0.0%	18
Demo Gypsum Scrap	0.5%	0.3%	677
Carpet	0.3%	0.2%	450
Felt Carpet Pad	0.0%	0.0%	0
Fiberglass Insulation	0.1%	0.1%	144
Concrete	0.7%	0.7%	927
Asphalt Paving	0.0%	0.0%	0
Other Aggregates	0.6%	0.5%	798
Rock	0.1%	0.1%	96
Asphalt Shingles	0.0%	0.0%	2
Other Asphaltic Roofing	0.0%	0.0%	38
Ceramics	0.4%	0.6%	589
Cement Fiber Board	0.1%	0.1%	129
Single-ply Roofing Membranes	0.0%	0.0%	0
Ceiling Tiles	0.0%	0.0%	7
Other Construction	1.6%	1.1%	2,086
Hazardous	**3.7%**		**5,013**
Dried Latex Paint	0.0%	0.0%	0
Liquid Latex Paint	0.1%	0.1%	136
Solvent-based Adhesives	0.0%	0.0%	0
Water-based Adhesives	0.0%	0.0%	0
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	21
Pesticides/Herbicides	0.2%	0.3%	238
Rechargeable Batteries	0.0%	0.0%	30
Other Dry-cell Batteries	0.0%	0.0%	19
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil/Diesel Oil	0.0%	0.0%	25
Asbestos	0.0%	0.0%	0
Explosives	0.0%	0.0%	0
Medical Wastes	3.2%	1.3%	4,316
Other Cleaners/Chemicals	0.0%	0.0%	15
Other Potentially Harmful Waste	0.2%	0.3%	212
Fines and Misc Materials	**1.4%**		**1,833**
Sand/Soil/Dirt	0.4%	0.4%	600
Non-distinct Fines	0.1%	0.1%	176
Miscellaneous Organics	0.4%	0.1%	557
Miscellaneous Inorganics	0.4%	0.2%	500
Totals	**100%**		**134,089**
Sample Count	259		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

2.2 Results by Commercial Subpopulation

Commercial waste composition estimates were calculated for the overall commercial substream as well as for each subpopulation: vehicle type, season, and generator type. The largest components for each subpopulation are shown in Table 2-3 and Table 2-4. The largest components are those that accounted for at least 5% of the subpopulation's total tonnage, by weight. *Food* was a large component disposed by all commercial subpopulations, except the CDL generator type. When the data are reported by subpopulation, the sample size for each analysis is smaller, which means that the calculations are subject to a more substantial range of error than calculations for the commercial stream as a whole.

Refer to Section 5 for more detail regarding the commercial substream.

Table 2-3. Largest Waste Components: by Commercial Subpopulation
(January – December 2012)

Subpopulation	Paper						Plastics			
	Newspaper	Plain OCC/ Kraft	Mixed Low-Grade	Compost./ Soiled	Non-Compost. Single-use Food Service	Mixed/ Other Paper	Other Rigid Packaging	Other Film	Durable Plastic Products	Plastic/ Other Materials
Vehicle Type										
Front Loader			5.3%	6.8%		6.7%		7.2%		
Rear Loader				9.7%				6.8%		
Compactor Roll-off			5.3%	6.8%		6.7%		7.2%		
Loose Roll-off				6.2%		6.2%				
Season										
Spring				7.7%				6.6%		
Summer				7.2%		5.8%		5.0%		
Autumn			5.9%	5.2%		5.8%		5.8%		
Winter				8.3%				5.8%		
Generator Type, by Site										
CDL										10.6%
Education			8.6%	12.2%						
Health Care				5.2%						
Hotel/Motel	5.8%		8.2%	7.2%		11.1%				
Manufacturing						5.4%		14.5%	6.3%	
Office			7.0%	14.7%	6.2%	8.0%		6.0%		
Other Services				9.7%		6.9%		5.3%		
Restaurants				8.8%		10.3%	5.3%			
Retail								5.7%		
Transportation		7.3%	5.3%	6.4%						
Wholesale						7.7%		14.7%		
Mixed Generator Types				7.6%				5.5%		
Overall Commercial				7.4%		5.2%		6.3%		

Table 2-4. Continued, Largest Waste Components: by Commercial Subpopulation
(January – December 2012)

Subpopulation	Organics				CDL Wastes								Pot. Harm. Wastes	
	Food	Mixed Textiles	Disposable Diaper	Rubber Products	Clean Dimen. Lumber	Pallets	Crates	Cont-aminated Wood	Demo Gypsum Scrap	Fiberglass Insulation	Concrete	Other Constr.	Pesticides/ Herbicides	Medical Waste
Vehicle Type														
Front Loader	22.9%													8.7%
Rear Loader	33.7%													
Compactor Roll-off	22.9%													8.7%
Loose Roll-off	21.6%													
Season														
Spring	31.3%													6.0%
Summer	26.1%													6.4%
Autumn	31.7%													
Winter	30.0%													
Generator Type, by Site														
CDL					7.5%		7.3%	13.0%		10.4%		12.3%		
Education	20.6%							31.9%						
Health Care	15.8%		6.3%											45.2%
Hotel/Motel	17.5%										10.5%		5.1%	
Manufacturing	12.3%	9.8%							5.7%					
Office	21.8%	5.3%												
Other Services	18.5%													
Restaurants	53.4%													
Retail	30.5%													
Transportation	11.7%			8.5%	5.0%	11.7%								
Wholesale	55.4%													
Mixed Generator Types	35.9%													
Overall Commercial	29.8%													

2.3 Overall Self-haul Substream

A total of 226 self-haul loads were sampled in 2012. The self-haul substream disposed of 70,474 tons of waste during the 2012 calendar year. The composition estimates for this substream were applied to the 70,474 tons to estimate the amount of waste disposed for each component category. Table 2-5 lists the top ten components disposed by the self-haul substream. Together, these ten components accounted for approximately 46% of the entire self-haul tonnage. *Furniture*, *clean dimensional lumber*, and *demo gypsum scrap* are all large components of this substream. The composition percentages, by weight, of each component in the self-haul substream are listed in Table 2-6.

Table 2-5. Top Ten Components: Overall Self-haul
(January – December 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Furniture	6.3%	6.3%	4,452
Clean Dimension Lumber	6.1%	12.4%	4,283
Demo Gypsum Scrap	5.5%	17.9%	3,890
Food	4.9%	22.8%	3,459
Other Construction	4.3%	27.1%	3,007
New Painted Wood	4.1%	31.2%	2,880
Contaminated Wood	3.9%	35.1%	2,766
Mixed/Other Paper	3.6%	38.7%	2,560
Mixed Low-grade Paper	3.4%	42.1%	2,387
Concrete	3.4%	45.5%	2,365
Total	**45.5%**		**32,049**

Table 2-6. Composition by Weight: Overall Self-haul
(January – December 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**14.4%**		**10,147**
Newspaper	0.7%	0.2%	494
Plain OCC/Kraft	1.5%	0.6%	1,037
Waxed OCC	0.2%	0.2%	142
Grocery/Shopping Bags	0.1%	0.0%	44
High-grade Paper	1.3%	0.5%	905
Mixed Low-grade Paper	3.4%	1.0%	2,387
Polycoated Containers	0.2%	0.1%	142
Compostable/Soiled	1.8%	0.8%	1,295
Pot. Comp. Single-use Food Service	0.6%	0.3%	405
Non-Comp. Single-use Food Service	1.0%	0.4%	736
Mixed/Other Paper	3.6%	0.3%	2,560
Plastic	**7.3%**		**5,155**
#1 PET Bottles	0.3%	0.1%	226
#2 HDPE Natural Bottles	0.1%	0.1%	85
#2 HDPE Colored Bottles	0.1%	0.0%	85
Other Bottles	0.0%	0.0%	22
Tubs	0.4%	0.2%	303
Expanded Poly. Non-food	0.1%	0.0%	50
Expanded Poly. Food-grade	0.0%	0.0%	14
Rigid Poly. Foam Insulation	0.0%	0.0%	21
Pot. Comp. Single-use Food Service	0.0%	0.0%	4
Non-Comp. Single-use Food Service	0.3%	0.1%	183
Other Rigid Packaging	0.2%	0.1%	142
Shopping/Dry Cleaning Bags	0.0%	0.0%	11
Stretch Wrap	0.0%	0.0%	32
Clean Polyethylene Film	0.0%	0.0%	8
Other Film	1.8%	0.4%	1,258
Plastic Pipe	0.0%	0.0%	24
Foam Carpet Padding	0.6%	0.4%	401
Durable Plastic Products	2.1%	0.7%	1,446
Plastic/Other Materials	1.2%	0.3%	839
Glass	**2.3%**		**1,620**
Clear Bottles	0.4%	0.4%	263
Green Bottles	0.1%	0.0%	37
Brown Bottles	0.5%	0.7%	327
Container Glass	0.0%	0.0%	0
Fluorescent Tubes	0.0%	0.0%	3
CFLs	0.0%	0.0%	4
Flat Glass	0.7%	0.2%	496
Automotive Glass	0.0%	0.0%	0
Other Glass	0.7%	0.4%	489
Metal	**3.9%**		**2,781**
Aluminum Beverage Cans	0.1%	0.0%	72
Aluminum Foil/Containers	0.0%	0.0%	33
Other Aluminum	0.1%	0.0%	51
Other Nonferrous	0.3%	0.1%	188
Steel Food Cans	0.0%	0.0%	26
Empty Aerosol Cans	0.0%	0.0%	22
Other Ferrous	1.4%	0.4%	1,001
Oil filters	0.0%	0.0%	3
Mixed Metals/Material	2.0%	0.5%	1,386
Organics	**10.6%**		**7,445**
Leaves and Grass	2.2%	1.0%	1,559
Prunings	0.1%	0.1%	43
Food	4.9%	0.6%	3,459
Fats, Oils, Grease	0.1%	0.0%	71
Textiles/Clothing	0.8%	0.4%	551
Mixed Textiles	1.3%	0.6%	886
Disposable Diapers	0.1%	0.0%	55
Animal By-products	0.3%	0.1%	196
Rubber Products	0.6%	0.5%	451
Tires	0.2%	0.3%	174

	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**8.1%**		**5,676**
Furniture	6.3%	1.6%	4,452
Mattresses	0.8%	0.4%	594
Small Appliances	0.3%	0.2%	231
Cell Phones	0.0%	0.0%	8
Audio/Visual Equipment	0.2%	0.1%	148
CRT Monitors	0.0%	0.0%	19
CRT Televisions	0.0%	0.0%	25
Other Electronics	0.3%	0.1%	199
CDL Wastes	**46.5%**		**32,770**
Clean Dimension Lumber	6.1%	1.5%	4,283
Clean Engineered Wood	3.4%	1.4%	2,361
Pallets	1.4%	1.1%	1,016
Crates	0.1%	0.1%	88
Other Untreated Wood	0.5%	0.4%	383
New Painted Wood	4.1%	1.1%	2,880
Old Painted Wood	2.5%	1.2%	1,758
Creosote-treated Wood	0.2%	0.2%	138
Other Treated Wood	3.1%	1.2%	2,201
Contaminated Wood	3.9%	1.1%	2,766
New Gypsum Scrap	0.5%	0.6%	368
Demo Gypsum Scrap	5.5%	2.3%	3,890
Carpet	3.2%	0.9%	2,254
Felt Carpet Pad	0.2%	0.2%	174
Fiberglass Insulation	0.3%	0.3%	239
Concrete	3.4%	1.4%	2,365
Asphalt Paving	0.1%	0.0%	43
Other Aggregates	1.8%	0.7%	1,294
Rock	0.1%	0.1%	40
Asphalt Shingles	0.4%	0.5%	285
Other Asphaltic Roofing	0.2%	0.1%	110
Ceramics	0.9%	0.6%	649
Cement Fiber Board	0.1%	0.1%	68
Single-ply Roofing Membranes	0.1%	0.2%	97
Ceiling Tiles	0.0%	0.0%	13
Other Construction	4.3%	1.1%	3,007
Hazardous	**3.1%**		**2,208**
Dried Latex Paint	0.0%	0.0%	32
Liquid Latex Paint	0.1%	0.1%	61
Solvent-based Adhesives	0.0%	0.1%	32
Water-based Adhesives	0.1%	0.1%	50
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	13
Pesticides/Herbicides	0.1%	0.1%	57
Rechargeable Batteries	0.0%	0.0%	11
Other Dry-cell Batteries	0.0%	0.0%	6
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	3
Motor Oil/Diesel Oil	0.1%	0.0%	80
Asbestos	0.0%	0.0%	26
Explosives	0.0%	0.0%	7
Medical Wastes	2.4%	2.5%	1,660
Other Cleaners/Chemicals	0.2%	0.2%	152
Other Potentially Harmful Waste	0.0%	0.0%	16
Fines and Misc Materials	**3.8%**		**2,672**
Sand/Soil/Dirt	3.2%	1.0%	2,262
Non-distinct Fines	0.1%	0.0%	40
Miscellaneous Organics	0.4%	0.4%	295
Miscellaneous Inorganics	0.1%	0.1%	75
Totals	**100%**		**70,474**
Sample Count	226		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

2.4 Results by Self-haul Subpopulation

Waste composition estimates were calculated for the various subpopulations of the self-haul substream, including: transfer station, vehicle type, season, and generator type by transfer station.

The largest components (each accounting for more than 5% of the total tonnage) for each subpopulation are shown in Table 2-7 and Table 2-8. *Furniture, clean dimensional lumber*, *food*, *new painted lumber*, and *demo gypsum scrap* were among the most prevalent materials in most self-haul subpopulations. When the data are reported by subpopulation, the sample size for each analysis is smaller, which means that the calculations are subject to a more substantial range of error than calculations for the overall self-haul stream.

Please see Section 6 for more detail regarding the self-haul substream.

Table 2-7.Largest Waste Components: by Self-haul Subpopulation
(January – December 2012)

Subpopulation	Paper			Organics		Appliances
	Mixed Low Grade	Compost./ Soiled	Mixed/ Other Paper	Food	Carpet	Furniture
Transfer Station						
NRDS						7.5%
SRDS			5.6%	7.2%		5.2%
Vehicle Type						
Car						7.0%
Truck				5.0%		6.3%
Season						
Spring						10.0%
Summer						
Autumn	6.0%		11.6%	12.5%		6.6%
Winter	5.7%	5.5%		6.2%		
Generator Type, by Site						
Residential, NRDS					6.2%	9.3%
Residential, SRDS					7.1%	5.8%
Non-residential, NRDS						8.4%
Non-residential, SRDS				9.5%		10.5%
Overall Self-Haul						**6.3%**

Table 2-8. Continued, Largest Waste Components: by Self-haul Subpopulation
(January – December 2012)

Subpopulation	CDL Wastes									Pot. Harm. Wastes	Fines & Misc.
	Clean Dimen. Lumber	Clean Engin. Wood	New Painted Wood	Old Painted Wood	Cont-aminated Wood	Demo Gypsum Scrap	Concrete	Other Aggregates	Other Constr.	Medical Wastes	Sand/ Soil/ Dirt
Transfer Station											
NRDS	6.8%					6.2%					
SRDS	5.4%										
Vehicle Type											
Car	7.3%							5.2%			23.1%
Truck	6.0%					6.0%					
Season											
Spring	7.7%			7.5%		13.6%					6.1%
Summer	9.7%	6.0%	7.6%				5.1%		6.2%		
Autumn											
Winter										10.4%	
Generator Type, by Site											
Residential, NRDS	7.5%		5.4%		6.3%		5.6%		6.0%		
Residential, SRDS	6.8%		6.7%						6.1%		
Non-residential, NRDS	9.5%		6.3%			7.7%	6.8%		5.6%		
Non-residential, SRDS			6.7%		7.0%	7.0%					
Overall Self-Haul	**6.1%**					**5.5%**					

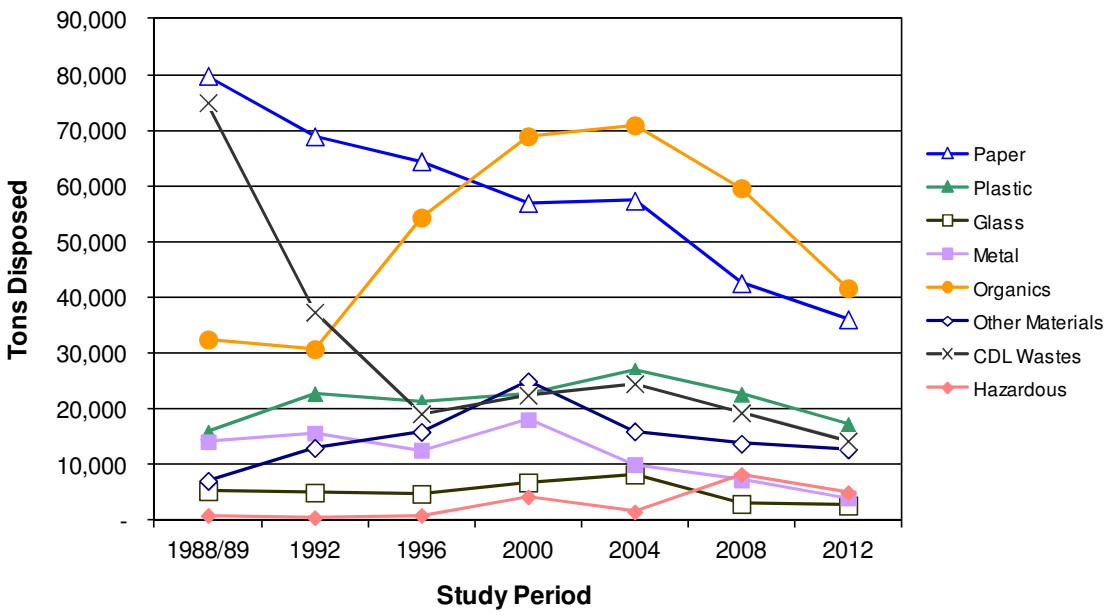
3 Commercial Results Compared to Previous Studies

In this section, the commercial results from the 2012 study are compared to the 1988/89, 1992, 1996, 2000, 2004, and 2008 commercial results. These studies followed the same basic methodology as the 2012 study. Changes in the composition percentages and the total amount of waste disposed from each broad waste category were analyzed to compare findings among study periods.[6] Section 3.1 provides an overview of the changes in the last 24 years. Sections 3.2 and 3.3 provide detailed results of the comparisons.

3.1 Trends in Disposed Commercial Waste

Figure 3-1 illustrates the changes in disposed commercial waste over the last 24 years. Overall, the quantity of disposed commercial waste decreased from about 230,780 tons in 1988/89 to about 194,338 in 1992. Disposal remained relatively steady from 1992 to 1996 (about 193,793 tons). In 2000, 225,435 tons of commercial wastes were disposed (an increase of about 31,642 tons). By 2004, disposal decreased to 215,921 tons, and further decreased in 2008 to 176,777 tons. In 2012, the disposed commercial waste totaled 134,089 tons, a decrease from the last study and the lowest tonnage since these studies began. Overall, the **Paper** and **CDL Wastes** broad material categories showed the greatest change in tonnage disposed since 1988/89. **Paper** decreased by 43,682 tons and **CDL Wastes** decreased by 60,694 tons during the 24 year period.

Figure 3-1. Changes in Commercial Disposed Tons, 1988/89 to 2012



3.2 Changes in Commercial Waste: 1988/89 to 2012

In Table 3-1, broad material categories that are bolded showed significant differences in composition between the 1988/89 and 2012 study periods. **Glass** was the only material category without significant changes between the two study periods: **paper**, **plastic**, **metal**,

[6] The composition percentages used to analyze the differences in disposed tonnage, and to perform statistical tests, were calculated using unweighted averages. Please see Appendix D for more detail.

organics, **other materials** (such as *textiles/clothing*, *carpet, and furniture*), **CDL wastes**, and **hazardous** all changed significantly.[7] Of note, the percentage of **CDL wastes** decreased from about 32.5% (75,004 tons) in 1988/89 to 10.7% (14,310 tons) in 2012, while **Organics** displayed the largest increase in composition, from 14.1% (32,517 tons) in 1988/89 to 31.1% (41,711 tons) in 2012.

Table 3-1. Changes in Commercial Waste: 1988/89 to 2012

	Percent		Change in	Disposed Tons	
	1988/89	2012	Composition %	1988/89	2012
Paper	**34.6%**	**27.0%**	**-7.6%** ↓	**79,827**	**36,145**
Plastic	**6.9%**	**12.9%**	**6.0%** ↑	**15,878**	**17,282**
Glass	2.3%	2.0%	-0.3% ↓	5,308	2,716
Metal	**6.1%**	**3.1%**	**-3.1%** ↓	**14,170**	**4,112**
Organics	**14.1%**	**31.1%**	**17.0%** ↑	**32,517**	**41,711**
Other Materials	**3.1%**	**9.5%**	**6.4%** ↑	**7,154**	**12,801**
CDL Wastes	**32.5%**	**10.7%**	**-21.8%** ↓	**75,004**	**14,310**
Hazardous	**0.4%**	**3.7%**	**3.3%** ↑	**923**	**5,013**
Total	**100%**	**100%**		**230,780**	**134,089**

Bold type indicates statistically significant changes.

3.3 Changes in Commercial Waste: 2008 to 2012

In Table 3-2, broad material categories that are bolded showed significant differences in percentages between the 2008 and 2012 study periods. The **metal** category experienced a significant change, and decreased from 4.1% (7,310 tons) in 2008 to 3.1% (4,112 tons) in 2012.

Table 3-2. Changes in Commercial Waste: 2008 to 2012

	Percent		Change in	Disposed Tons	
	2008	2012	Composition %	2008	2012
Paper	24.1%	27.0%	2.8% ↑	42,628	36,145
Plastic	12.8%	12.9%	0.0% ↔	22,700	17,282
Glass	1.7%	2.0%	0.3% ↑	3,010	2,716
Metal	**4.1%**	**3.1%**	**-1.1%** ↓	**7,310**	**4,112**
Organics	33.8%	31.1%	-2.6% ↓	59,663	41,711
Other Materials	7.8%	9.5%	1.7% ↑	13,827	12,801
CDL Wastes	11.0%	10.7%	-0.3% ↓	19,359	14,310
Hazardous	4.7%	3.7%	-0.9% ↓	8,280	5,013
Total	100%	100%		176,777	134,089

Bold type indicates statistically significant changes.

4 Self-haul Results Compared to Previous Studies

In this section, self-haul results from 2012 are compared with the results of the 1988/89, 1990, 1992, 1996, 2000, 2004, and 2008 studies. As with the commercial substream, both composition percentages and the total amount of waste disposed of each broad material

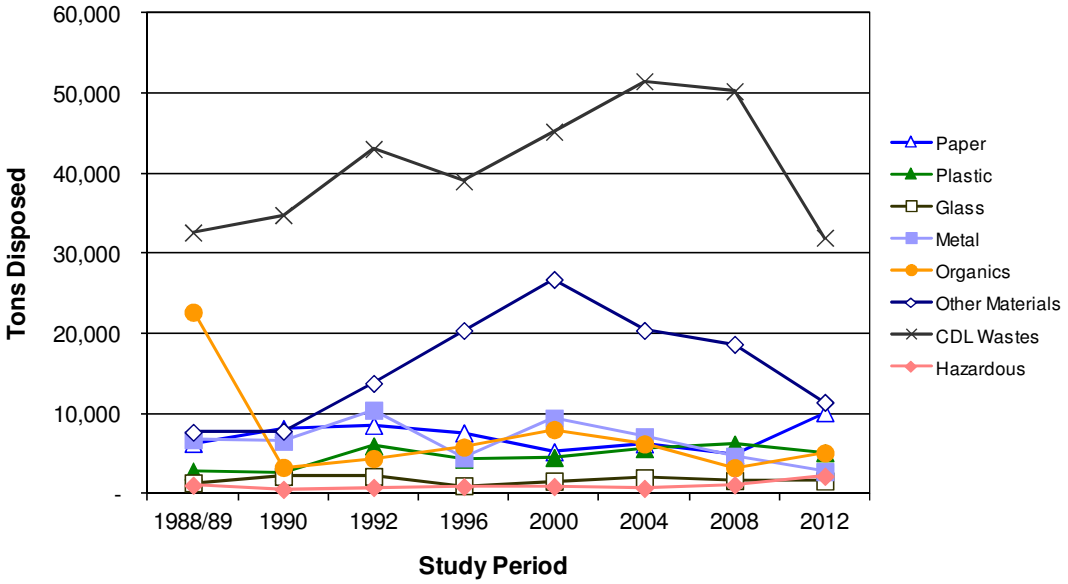
[7] For the purposes of this study, only those calculation results with a p-value of less than 1.25% are considered to be statistically significant. For more detail about these calculations, please see Appendix E.

category were analyzed for the self-haul substream.[8] Section 4.1 provides an overview of the changes in the last 24 years. Sections 4.2 and Section 4.3 provide the detailed results of the comparisons.

4.1 Trends in Disposed Self-haul Waste

Changes in the quantity of disposed self-haul waste over the last 24 years are depicted in Figure 4-1. The total amount of self-haul waste decreased from 81,475 tons in 1988/89 to 66,198 tons in 1990. Disposal then increased to 89,308 tons in 1992, followed in 1996 by a slight decrease to 83,724 tons, and then an increase to 101,882 tons in 2000. Self-haul disposal remained relatively stable in 2004 with a total of 99,980 tons, and then decreased to 90,829 tons in 2008 and to 70,474 tons in 2012. Between 1988/89 and 2012, **Organics** experienced the largest change in tons disposed by self-haul vehicles, decreasing from about 22,691 tons in 1988/89 to less than 5,132 tons in 2012.

Figure 4-1. Changes in Self-haul Disposed Tons, 1988/89 to 2012



4.2 Changes in Self-haul Waste: 1988/89 to 2012

In Table 4-1, bolded broad material categories experienced significant differences in percentages between the 1988/89 and 2012 study periods. **Plastic**, **metal**, **organics**, **other materials**, and **CDL wastes** displayed a significant change. Of note, the biggest change appeared to be in **organics**, which decreased from 27.9% (22,691 tons) in 1988/89 to 7.3% (5,132 tons) in 2012.

[8] As with the commercial substream comparisons in Section 2, the composition percentages used to analyze the differences in disposed tonnage, and to perform statistical tests were calculated using unweighted averages. Please Appendix D for more detail.

Table 4-1. Changes in Self-haul Waste: 1988/89 to 2012

	Percent		Change in	Disposed Tons	
	1988/89	2012	Composition %	1988/89	2012
Paper	7.8%	14.4%	6.6% ↑	6,314	10,147
Plastic	**3.5%**	**7.3%**	**3.8%** ↑	**2,852**	**5,155**
Glass	1.7%	2.3%	0.6% ↑	1,401	1,620
Metal	**8.3%**	**3.9%**	**-4.4%** ↓	**6,787**	**2,781**
Organics	**27.9%**	**7.3%**	**-20.6%** ↓	**22,691**	**5,132**
Other Materials	**9.5%**	**16.2%**	**6.8%** ↑	**7,708**	**11,438**
CDL Wastes	**40.1%**	**45.4%**	**5.3%** ↑	**32,639**	**31,993**
Hazardous	1.3%	3.1%	1.8% ↑	1,084	2,208
Total	**100%**	**100%**		**81,475**	**70,474**

Bold type indicates statistically significant changes.

4.3 Changes in Self-haul Waste: 2008 to 2012

As shown in Table 4-2, none of the broad material types showed a significant change in composition from the 2008 study period to the 2012 study period.

Table 4-2. Changes in Self-haul Waste: 2008 to 2012

	Percent		Change in	Disposed Tons	
	2008	2012	Composition %	2008	2012
Paper	5.4%	14.4%	9.0% ↑	4,875	10,147
Plastic	6.8%	7.3%	0.5% ↑	6,220	5,155
Glass	1.9%	2.3%	0.4% ↑	1,689	1,620
Metal	5.2%	3.9%	-1.2% ↓	4,692	2,781
Organics	3.6%	7.3%	3.7% ↑	3,280	5,132
Other Materials	20.6%	16.2%	-4.3% ↓	18,677	11,438
CDL Wastes	55.3%	45.4%	-9.9% ↓	50,261	31,993
Hazardous	1.2%	3.1%	1.9% ↑	1,135	2,208
Total	**100%**	**100%**		**90,829**	**70,474**

Bold type indicates statistically significant changes.

5 Commercial Composition Results, by Subpopulation

A total of 259 loads from the commercial stream were sampled from January to December 2012. Table 5-1 summarizes the sample information for each commercial subpopulation. The average sample weight for the 259 commercial samples was approximately 246 pounds. The City and its two contracted haulers provided the total 2012 disposal tonnages presented in this section of the report.

As shown in Table 5-1, many of the generator-specific analyses are based on a very small number of samples and are thus subject to a relatively wide margin of error.[9]

[9] There was no intent to capture a certain number of samples from any particular generator type. Sample selection was based on vehicle type; please refer to Appendix C for more detail.

Table 5-1. Description of Samples for each Commercial Subpopulation
(January – December 2012)

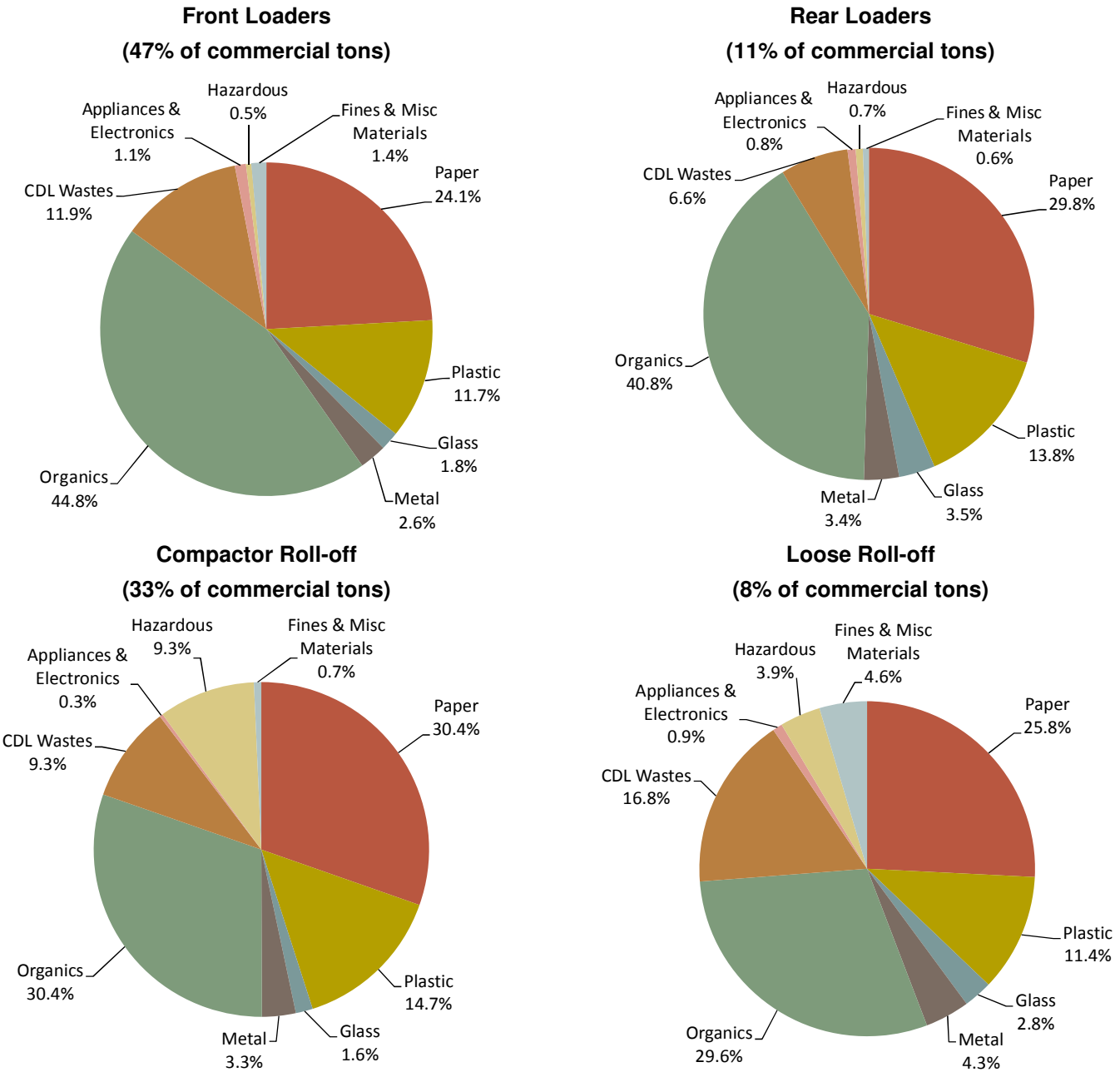
Subpopulation	Sample Count	Total Sample Weight *(All weights in pounds)*	Average Sample Weight
Vehicle Type			
Front Loader	84	20,685.6	246.3
Rear Loader	43	10,576.0	246.0
Compactor Roll-off	96	23,250.2	242.2
Loose Roll-off	36	9,153.2	254.3
Season			
Spring	44	10,904.6	247.8
Summer	85	18,744.4	220.5
Autumn	45	12,636.9	280.8
Winter	85	21,379.0	251.5
Generator Type*			
CDL	2	587.6	293.8
Education	4	942.3	235.6
Health Care	21	4,925.3	234.5
Hotel/Motel	6	1,520.2	253.4
Manufacturing	7	1,766.5	252.4
Office	15	3,744.4	249.6
Other Services	19	4,895.7	257.7
Restaurant	3	693.2	231.1
Retail	38	9,297.7	244.7
Transportation	8	1,983.1	247.9
Wholesale	6	1,433.4	238.9
sine: Mixed Commercial	128	31,426.4	245.5
Overall	**259**	**63,664.9**	**245.8**

* Two samples were not categorized by generator type.

5.1 Commercial Composition by Vehicle Type

Figure 5-1 displays the overall composition results, by weight, of the waste disposed by front loaders, rear loaders, compactor roll-offs, and loose roll-offs. Combined, **paper** and **organics** were the most prevalent broad material categories for all vehicle types, ranging from about 55% of material in loose roll-offs to nearly 71% in rear loaders. The following sections examine each vehicle type's waste in more detail.

Figure 5-1. Commercial Composition Summary: by Vehicle Type
(January – December 2012)



5.1.1 Front Loaders

A total of 84 front loader packer truckloads were sampled during this study period. Commercial front loaders disposed approximately 63,589 tons of waste, or about 47% of the commercial waste stream, during the study period. The composition estimates for this subpopulation were applied to the 63,589 tons to estimate the amount of waste disposed for each component category. As shown in Table 5-2, *food* was the largest component, accounting for approximately 35% of the total tons disposed by front loaders in 2012. The top ten components summed to over 67% of the total, by weight. The full composition results for front loaders are presented in Table 5-6.

Table 5-2. Top Ten Components: Commercial Front Loaders
(January – December 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Food	35.2%	35.2%	22,374
Compostable/Soiled	7.6%	42.8%	4,813
Other Film	5.9%	48.7%	3,765
Mixed Low-grade Paper	4.3%	53.0%	2,746
Mixed/Other Paper	4.3%	57.2%	2,706
Disposable Diapers	2.4%	59.6%	1,510
Other Construction	2.1%	61.7%	1,340
Plain OCC/Kraft	2.1%	63.8%	1,317
Leaves and Grass	1.8%	65.6%	1,147
Animal By-products	1.8%	67.4%	1,133
Total	**67.4%**		**42,852**

5.1.2 Rear Loaders

Forty-three rear loaders were sampled from the commercial substream. Commercial rear loaders disposed approximately 14,895 tons of waste, or approximately 11% of the commercial waste stream. The composition estimates for this subpopulation were applied to the 14,895 tons to estimate the amount of waste disposed for each component category. Table 5-3 lists the top ten components disposed by rear loader trucks. *Food* alone accounted for approximately 34%, by weight. *Compostable/soiled paper* made up nearly 10% of the total. The top ten components listed in Table 5-3 summed to approximately 73% of the total waste disposed by rear loaders. The full composition results for rear loaders are listed in Table 5-7.

Table 5-3. Top Ten Components: Commercial Rear Loaders
(January – December 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Food	33.7%	33.7%	5,025
Compostable/Soiled	9.7%	43.5%	1,451
Other Film	6.8%	50.3%	1,017
Mixed Low-grade Paper	4.4%	54.7%	655
High-grade Paper	4.4%	59.1%	651
Mixed/Other Paper	4.3%	63.4%	647
Pallets	3.3%	66.7%	486
Disposable Diapers	2.5%	69.1%	365
Newspaper	2.3%	71.4%	344
Other Ferrous	1.9%	73.4%	286
Total	**73.4%**		**10,928**

5.1.3 Compactor Roll-offs

A total of 96 compactor roll-off boxes were sampled during this study period. Commercial compactor roll-offs disposed approximately 44,435 tons of waste (about 33% of the commercial waste stream) from January to December 2012. The composition estimates for this subpopulation were applied to the 44,435 tons to estimate the amount of waste disposed for each component category. As shown in Table 5-4, *food* was the largest component of waste hauled in compactors, and accounted for about 23% of the total compactor tonnage, by weight. *Medical wastes*, *other film*, *compostable/soiled paper*, *mixed/other paper*, and *mixed low-grade paper* were also large components. Together, the top ten components made up nearly 70% of the total, by weight. Table 5-8 contains detailed composition results for compactor roll-offs.

Table 5-4. Top Ten Components: Commercial Compactor Roll-offs
(January – December 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Food	22.9%	22.9%	10,192
Medical Wastes	8.7%	31.7%	3,872
Other Film	7.2%	38.9%	3,209
Compostable/Soiled	6.8%	45.7%	3,022
Mixed/Other Paper	6.7%	52.4%	2,991
Mixed Low-grade Paper	5.3%	57.7%	2,356
Plain OCC/Kraft	4.3%	62.0%	1,895
Contaminated Wood	2.8%	64.7%	1,230
Mixed Textiles	2.6%	67.4%	1,169
Non-Comp. Single-use Food Service	2.5%	69.8%	1,092
Total	**69.8%**		**31,029**

5.1.4 Loose Roll-offs

A total of 36 commercial samples were captured from loose roll-off drop boxes. Commercial loose roll-offs disposed approximately 11,170 tons of waste during the study period, making up approximately 8% of the commercial waste stream. The composition estimates for this subpopulation were applied to the 11,170 tons to estimate the amount of waste disposed for each component category. Table 5-5 lists the top ten components of waste hauled in loose roll-offs. *Food* was the largest component, accounting for about 22% of loose roll-off tonnage, by weight. When summed, the top ten components made up nearly 57% of all loose roll-off waste. Table 5-9 lists the complete composition results for loose roll-offs.

Table 5-5. Top Ten Components Commercial Loose Roll-offs
(January – December 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Food	21.6%	21.6%	2,413
Compostable/Soiled	6.2%	27.8%	698
Mixed/Other Paper	6.2%	34.1%	695
Mixed Low-grade Paper	3.9%	38.0%	437
Other Film	3.7%	41.7%	415
Plain OCC/Kraft	3.3%	45.0%	371
Clean Dimension Lumber	3.2%	48.3%	362
Contaminated Wood	3.1%	51.4%	350
Mixed Textiles	2.8%	54.2%	317
Sand/Soil/Dirt	2.4%	56.6%	266
Total	**56.6%**		**6,323**

5.1.5 Comparisons among Vehicle Types

The wastes disposed by front loaders, rear loaders, compactor roll-offs, and loose roll-offs contain many of the same top ten components. *Food* was the largest component for waste hauled by all vehicle types. *Compostable/soiled paper*, *other film*, *mixed/other paper*, and *mixed low-grade paper* were also top ten components for all vehicle types.

There were also differences among the top ten components in waste hauled by these vehicles. *Pallets* and *newspaper* were top ten components for rear loaders only, while *clean dimensional lumber* was a top ten component for loose roll-offs only. *Leaves and grass* and *animal by-products* only appeared in the top ten component list for front loaders. *Non-compostable single-use food service* were unique to compactor roll-offs.

Table 5-6. Composition by Weight: Commercial Front Loaders
(January – December 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**24.1%**		**15,335**
Newspaper	1.4%	0.4%	863
Plain OCC/Kraft	2.1%	0.5%	1,317
Waxed OCC	0.8%	0.6%	480
Grocery/Shopping Bags	0.5%	0.3%	341
High-grade Paper	1.2%	0.3%	788
Mixed Low-grade Paper	4.3%	0.6%	2,746
Polycoated Containers	0.1%	0.1%	50
Compostable/Soiled	7.6%	1.4%	4,813
Pot. Comp. Single-use Food Service	0.3%	0.2%	188
Non-Comp. Single-use Food Service	1.6%	0.5%	1,043
Mixed/Other Paper	4.3%	0.9%	2,706
Plastic	**11.7%**		**7,445**
#1 PET Bottles	0.7%	0.1%	428
#2 HDPE Natural Bottles	0.3%	0.1%	204
#2 HDPE Colored Bottles	0.2%	0.1%	126
Other Bottles	0.0%	0.0%	30
Tubs	0.7%	0.2%	463
Expanded Poly. Non-food	0.1%	0.0%	84
Expanded Poly. Food-grade	0.1%	0.0%	64
Rigid Poly. Foam Insulation	0.0%	0.0%	7
Pot. Comp. Single-use Food Service	0.0%	0.0%	20
Non-Comp. Single-use Food Service	0.6%	0.1%	385
Other Rigid Packaging	0.5%	0.1%	324
Shopping/Dry Cleaning Bags	0.0%	0.0%	28
Stretch Wrap	0.3%	0.1%	179
Clean Polyethylene Film	0.2%	0.1%	116
Other Film	5.9%	0.7%	3,765
Plastic Pipe	0.1%	0.1%	36
Foam Carpet Padding	0.0%	0.0%	7
Durable Plastic Products	0.7%	0.2%	467
Plastic/Other Materials	1.1%	0.5%	714
Glass	**1.8%**		**1,148**
Clear Bottles	0.6%	0.1%	390
Green Bottles	0.4%	0.1%	271
Brown Bottles	0.4%	0.1%	275
Container Glass	0.1%	0.0%	40
Fluorescent Tubes	0.0%	0.0%	2
CFLs	0.0%	0.0%	6
Flat Glass	0.1%	0.0%	32
Automotive Glass	0.0%	0.0%	0
Other Glass	0.2%	0.1%	132
Metal	**2.6%**		**1,674**
Aluminum Beverage Cans	0.4%	0.1%	253
Aluminum Foil/Containers	0.3%	0.3%	166
Other Aluminum	0.0%	0.0%	11
Other Nonferrous	0.1%	0.1%	76
Steel Food Cans	0.5%	0.1%	312
Empty Aerosol Cans	0.1%	0.0%	74
Other Ferrous	0.7%	0.3%	446
Oil filters	0.0%	0.1%	23
Mixed Metals/Material	0.5%	0.2%	315
Organics	**44.8%**		**28,469**
Leaves and Grass	1.8%	0.9%	1,147
Prunings	0.0%	0.1%	20
Food	35.2%	3.6%	22,374
Fats, Oils, Grease	0.1%	0.2%	87
Textiles/Clothing	1.5%	0.6%	964
Mixed Textiles	1.1%	0.4%	719
Disposable Diapers	2.4%	1.0%	1,510
Animal By-products	1.8%	0.9%	1,133
Rubber Products	0.6%	0.3%	399
Tires	0.2%	0.3%	115

Material	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**1.1%**		**689**
Furniture	0.5%	0.4%	289
Mattresses	0.0%	0.0%	0
Small Appliances	0.1%	0.2%	95
Cell Phones	0.0%	0.0%	0
Audio/Visual Equipment	0.1%	0.1%	95
CRT Monitors	0.0%	0.1%	32
CRT Televisions	0.0%	0.0%	0
Other Electronics	0.3%	0.3%	179
CDL Wastes	**11.9%**		**7,578**
Clean Dimension Lumber	0.9%	0.5%	603
Clean Engineered Wood	1.0%	0.5%	621
Pallets	0.9%	0.7%	563
Crates	0.4%	0.6%	259
Other Untreated Wood	0.1%	0.1%	41
New Painted Wood	0.7%	0.4%	416
Old Painted Wood	0.1%	0.1%	81
Creosote-treated Wood	0.5%	0.9%	339
Other Treated Wood	0.3%	0.2%	170
Contaminated Wood	0.7%	0.4%	476
New Gypsum Scrap	0.0%	0.0%	18
Demo Gypsum Scrap	0.3%	0.4%	220
Carpet	0.5%	0.4%	319
Felt Carpet Pad	0.0%	0.0%	0
Fiberglass Insulation	0.0%	0.1%	22
Concrete	1.1%	1.4%	684
Asphalt Paving	0.0%	0.0%	0
Other Aggregates	1.2%	1.0%	739
Rock	0.0%	0.1%	32
Asphalt Shingles	0.0%	0.0%	0
Other Asphaltic Roofing	0.0%	0.0%	0
Ceramics	0.8%	1.2%	499
Cement Fiber Board	0.2%	0.3%	129
Single-ply Roofing Membranes	0.0%	0.0%	0
Ceiling Tiles	0.0%	0.0%	7
Other Construction	2.1%	1.9%	1,340
Hazardous	**0.5%**		**332**
Dried Latex Paint	0.0%	0.0%	0
Liquid Latex Paint	0.1%	0.1%	36
Solvent-based Adhesives	0.0%	0.0%	0
Water-based Adhesives	0.0%	0.0%	0
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.1%	21
Pesticides/Herbicides	0.0%	0.0%	0
Rechargeable Batteries	0.0%	0.1%	27
Other Dry-cell Batteries	0.0%	0.0%	4
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil/Diesel Oil	0.0%	0.1%	25
Asbestos	0.0%	0.0%	0
Explosives	0.0%	0.0%	0
Medical Wastes	0.3%	0.3%	211
Other Cleaners/Chemicals	0.0%	0.0%	7
Other Potentially Harmful Waste	0.0%	0.0%	0
Fines and Misc Materials	**1.4%**		**919**
Sand/Soil/Dirt	0.5%	0.5%	299
Non-distinct Fines	0.1%	0.2%	82
Miscellaneous Organics	0.4%	0.2%	270
Miscellaneous Inorganics	0.4%	0.4%	267
Totals	**100%**		**63,589**
Sample Count	84		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-7. Composition by Weight: Commercial Rear Loaders
(January – December 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**29.8%**		**4,432**
Newspaper	2.3%	2.6%	344
Plain OCC/Kraft	1.9%	0.5%	285
Waxed OCC	0.1%	0.1%	20
Grocery/Shopping Bags	0.5%	0.4%	74
High-grade Paper	4.4%	4.5%	651
Mixed Low-grade Paper	4.4%	1.1%	655
Polycoated Containers	0.2%	0.1%	23
Compostable/Soiled	9.7%	3.2%	1,451
Pot. Comp. Single-use Food Service	0.3%	0.2%	48
Non-Comp. Single-use Food Service	1.6%	0.4%	234
Mixed/Other Paper	4.3%	2.0%	647
Plastic	**13.8%**		**2,051**
#1 PET Bottles	0.6%	0.1%	91
#2 HDPE Natural Bottles	0.3%	0.1%	42
#2 HDPE Colored Bottles	0.3%	0.2%	47
Other Bottles	0.0%	0.0%	3
Tubs	0.9%	0.9%	130
Expanded Poly. Non-food	0.5%	0.7%	77
Expanded Poly. Food-grade	0.1%	0.1%	13
Rigid Poly. Foam Insulation	0.0%	0.0%	1
Pot. Comp. Single-use Food Service	0.1%	0.1%	9
Non-Comp. Single-use Food Service	0.7%	0.4%	103
Other Rigid Packaging	0.3%	0.2%	52
Shopping/Dry Cleaning Bags	0.1%	0.0%	8
Stretch Wrap	0.7%	1.2%	109
Clean Polyethylene Film	0.0%	0.0%	5
Other Film	6.8%	1.6%	1,017
Plastic Pipe	0.0%	0.0%	0
Foam Carpet Padding	0.0%	0.0%	1
Durable Plastic Products	0.9%	0.5%	132
Plastic/Other Materials	1.4%	0.6%	211
Glass	**3.5%**		**528**
Clear Bottles	0.9%	0.5%	135
Green Bottles	0.3%	0.1%	38
Brown Bottles	0.4%	0.1%	66
Container Glass	0.0%	0.0%	4
Fluorescent Tubes	0.0%	0.0%	0
CFLs	0.0%	0.0%	0
Flat Glass	0.1%	0.1%	8
Automotive Glass	0.0%	0.0%	0
Other Glass	1.8%	2.7%	275
Metal	**3.4%**		**506**
Aluminum Beverage Cans	0.3%	0.1%	41
Aluminum Foil/Containers	0.1%	0.1%	19
Other Aluminum	0.0%	0.0%	1
Other Nonferrous	0.1%	0.1%	11
Steel Food Cans	0.3%	0.1%	44
Empty Aerosol Cans	0.1%	0.0%	11
Other Ferrous	1.9%	1.3%	286
Oil filters	0.0%	0.0%	0
Mixed Metals/Material	0.6%	0.4%	93
Organics	**40.8%**		**6,084**
Leaves and Grass	0.7%	0.5%	100
Prunings	0.0%	0.0%	5
Food	33.7%	9.9%	5,025
Fats, Oils, Grease	0.0%	0.0%	0
Textiles/Clothing	1.6%	0.6%	236
Mixed Textiles	0.5%	0.3%	75
Disposable Diapers	2.5%	1.5%	365
Animal By-products	1.1%	0.7%	159
Rubber Products	0.8%	0.8%	120
Tires	0.0%	0.0%	0

Material	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**0.8%**		**118**
Furniture	0.2%	0.3%	33
Mattresses	0.1%	0.2%	21
Small Appliances	0.1%	0.2%	14
Cell Phones	0.0%	0.0%	0
Audio/Visual Equipment	0.0%	0.1%	7
CRT Monitors	0.0%	0.0%	0
CRT Televisions	0.3%	0.5%	42
Other Electronics	0.0%	0.0%	1
CDL Wastes	**6.6%**		**987**
Clean Dimension Lumber	0.2%	0.1%	32
Clean Engineered Wood	0.1%	0.1%	9
Pallets	3.3%	5.4%	486
Crates	0.0%	0.0%	0
Other Untreated Wood	0.0%	0.0%	0
New Painted Wood	0.2%	0.2%	33
Old Painted Wood	0.0%	0.0%	0
Creosote-treated Wood	0.1%	0.1%	9
Other Treated Wood	0.5%	0.5%	69
Contaminated Wood	0.9%	0.9%	127
New Gypsum Scrap	0.0%	0.0%	0
Demo Gypsum Scrap	0.3%	0.4%	50
Carpet	0.4%	0.5%	65
Felt Carpet Pad	0.0%	0.0%	0
Fiberglass Insulation	0.0%	0.0%	3
Concrete	0.2%	0.3%	37
Asphalt Paving	0.0%	0.0%	0
Other Aggregates	0.1%	0.1%	14
Rock	0.0%	0.0%	0
Asphalt Shingles	0.0%	0.0%	0
Other Asphaltic Roofing	0.0%	0.0%	0
Ceramics	0.3%	0.5%	51
Cement Fiber Board	0.0%	0.0%	0
Single-ply Roofing Membranes	0.0%	0.0%	0
Ceiling Tiles	0.0%	0.0%	0
Other Construction	0.0%	0.0%	3
Hazardous	**0.7%**		**102**
Dried Latex Paint	0.0%	0.0%	0
Liquid Latex Paint	0.0%	0.0%	4
Solvent-based Adhesives	0.0%	0.0%	0
Water-based Adhesives	0.0%	0.0%	0
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	0
Pesticides/Herbicides	0.0%	0.0%	0
Rechargeable Batteries	0.0%	0.0%	0
Other Dry-cell Batteries	0.0%	0.0%	4
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil/Diesel Oil	0.0%	0.0%	0
Asbestos	0.0%	0.0%	0
Explosives	0.0%	0.0%	0
Medical Wastes	0.6%	0.6%	93
Other Cleaners/Chemicals	0.0%	0.0%	1
Other Potentially Harmful Waste	0.0%	0.0%	0
Fines and Misc Materials	**0.6%**		**87**
Sand/Soil/Dirt	0.1%	0.1%	8
Non-distinct Fines	0.1%	0.1%	15
Miscellaneous Organics	0.4%	0.3%	53
Miscellaneous Inorganics	0.1%	0.1%	11
Totals	**100%**		**14,895**
Sample Count	43		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-8. Composition by Weight: Commercial Compactor Roll-offs
(January – December 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**30.4%**		**13,499**
Newspaper	1.6%	0.7%	733
Plain OCC/Kraft	4.3%	1.2%	1,895
Waxed OCC	0.5%	0.3%	208
Grocery/Shopping Bags	0.3%	0.1%	114
High-grade Paper	2.2%	0.7%	960
Mixed Low-grade Paper	5.3%	1.3%	2,356
Polycoated Containers	0.1%	0.1%	45
Compostable/Soiled	6.8%	1.1%	3,022
Pot. Comp. Single-use Food Service	0.2%	0.2%	83
Non-Comp. Single-use Food Service	2.5%	0.7%	1,092
Mixed/Other Paper	6.7%	1.8%	2,991
Plastic	**14.7%**		**6,516**
#1 PET Bottles	0.9%	0.2%	381
#2 HDPE Natural Bottles	0.4%	0.1%	169
#2 HDPE Colored Bottles	0.2%	0.1%	78
Other Bottles	0.0%	0.0%	17
Tubs	0.6%	0.2%	268
Expanded Poly. Non-food	0.2%	0.1%	97
Expanded Poly. Food-grade	0.2%	0.1%	68
Rigid Poly. Foam Insulation	0.0%	0.0%	5
Pot. Comp. Single-use Food Service	0.0%	0.0%	7
Non-Comp. Single-use Food Service	1.0%	0.2%	428
Other Rigid Packaging	0.7%	0.2%	290
Shopping/Dry Cleaning Bags	0.0%	0.0%	19
Stretch Wrap	0.7%	0.5%	303
Clean Polyethylene Film	0.2%	0.2%	84
Other Film	7.2%	2.4%	3,209
Plastic Pipe	0.0%	0.0%	2
Foam Carpet Padding	0.0%	0.0%	0
Durable Plastic Products	1.4%	0.6%	605
Plastic/Other Materials	1.1%	0.6%	485
Glass	**1.6%**		**731**
Clear Bottles	0.7%	0.3%	294
Green Bottles	0.2%	0.1%	104
Brown Bottles	0.5%	0.2%	214
Container Glass	0.0%	0.0%	6
Fluorescent Tubes	0.0%	0.0%	0
CFLs	0.0%	0.0%	0
Flat Glass	0.0%	0.1%	22
Automotive Glass	0.0%	0.0%	0
Other Glass	0.2%	0.2%	91
Metal	**3.3%**		**1,453**
Aluminum Beverage Cans	0.4%	0.1%	186
Aluminum Foil/Containers	0.1%	0.0%	38
Other Aluminum	0.0%	0.0%	8
Other Nonferrous	0.0%	0.0%	13
Steel Food Cans	0.5%	0.2%	201
Empty Aerosol Cans	0.1%	0.0%	23
Other Ferrous	1.7%	1.0%	773
Oil filters	0.0%	0.0%	0
Mixed Metals/Material	0.5%	0.3%	212
Organics	**30.4%**		**13,498**
Leaves and Grass	0.6%	0.5%	262
Prunings	0.0%	0.0%	0
Food	22.9%	3.7%	10,192
Fats, Oils, Grease	0.0%	0.0%	3
Textiles/Clothing	1.0%	0.6%	438
Mixed Textiles	2.6%	2.2%	1,169
Disposable Diapers	1.8%	2.0%	789
Animal By-products	0.4%	0.4%	170
Rubber Products	1.1%	0.7%	476
Tires	0.0%	0.0%	0
Appliances and Electronics	**0.3%**		**145**
Furniture	0.1%	0.1%	44
Mattresses	0.1%	0.1%	30
Small Appliances	0.1%	0.1%	34
Cell Phones	0.0%	0.0%	0
Audio/Visual Equipment	0.0%	0.0%	16
CRT Monitors	0.0%	0.0%	0
CRT Televisions	0.0%	0.0%	0
Other Electronics	0.0%	0.1%	21
CDL Wastes	**9.3%**		**4,136**
Clean Dimension Lumber	0.7%	0.4%	296
Clean Engineered Wood	1.1%	1.2%	472
Pallets	1.8%	1.4%	779
Crates	0.2%	0.2%	100
Other Untreated Wood	0.0%	0.1%	16
New Painted Wood	0.1%	0.1%	46
Old Painted Wood	0.3%	0.4%	125
Creosote-treated Wood	0.0%	0.0%	0
Other Treated Wood	0.1%	0.1%	41
Contaminated Wood	2.8%	2.2%	1,230
New Gypsum Scrap	0.0%	0.0%	0
Demo Gypsum Scrap	0.5%	0.5%	210
Carpet	0.0%	0.1%	21
Felt Carpet Pad	0.0%	0.0%	0
Fiberglass Insulation	0.0%	0.0%	0
Concrete	0.2%	0.2%	69
Asphalt Paving	0.0%	0.0%	0
Other Aggregates	0.1%	0.1%	44
Rock	0.1%	0.2%	53
Asphalt Shingles	0.0%	0.0%	0
Other Asphaltic Roofing	0.1%	0.1%	30
Ceramics	0.1%	0.1%	39
Cement Fiber Board	0.0%	0.0%	0
Single-ply Roofing Membranes	0.0%	0.0%	0
Ceiling Tiles	0.0%	0.0%	0
Other Construction	1.3%	2.0%	563
Hazardous	**9.3%**		**4,141**
Dried Latex Paint	0.0%	0.0%	0
Liquid Latex Paint	0.0%	0.0%	13
Solvent-based Adhesives	0.0%	0.0%	0
Water-based Adhesives	0.0%	0.0%	0
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	0
Pesticides/Herbicides	0.5%	0.9%	238
Rechargeable Batteries	0.0%	0.0%	3
Other Dry-cell Batteries	0.0%	0.0%	1
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil/Diesel Oil	0.0%	0.0%	0
Asbestos	0.0%	0.0%	0
Explosives	0.0%	0.0%	0
Medical Wastes	8.7%	3.8%	3,872
Other Cleaners/Chemicals	0.0%	0.0%	5
Other Potentially Harmful Waste	0.0%	0.0%	8
Fines and Misc Materials	**0.7%**		**316**
Sand/Soil/Dirt	0.1%	0.1%	27
Non-distinct Fines	0.1%	0.2%	62
Miscellaneous Organics	0.2%	0.2%	109
Miscellaneous Inorganics	0.3%	0.3%	118
Totals	**100%**		**44,435**
Sample Count	96		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-9. Composition by Weight: Commercial Loose Roll-offs
(January – December 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**25.8%**		**2,878**
Newspaper	0.9%	0.5%	104
Plain OCC/Kraft	3.3%	0.9%	371
Waxed OCC	0.8%	0.7%	89
Grocery/Shopping Bags	0.1%	0.1%	11
High-grade Paper	1.9%	0.8%	207
Mixed Low-grade Paper	3.9%	1.5%	437
Polycoated Containers	0.2%	0.2%	18
Compostable/Soiled	6.2%	2.0%	698
Pot. Comp. Single-use Food Service	0.1%	0.1%	7
Non-Comp. Single-use Food Service	2.2%	1.2%	242
Mixed/Other Paper	6.2%	4.8%	695
Plastic	**11.4%**		**1,269**
#1 PET Bottles	0.4%	0.1%	40
#2 HDPE Natural Bottles	0.1%	0.0%	12
#2 HDPE Colored Bottles	0.3%	0.4%	39
Other Bottles	0.0%	0.0%	4
Tubs	0.2%	0.1%	27
Expanded Poly. Non-food	0.5%	0.5%	58
Expanded Poly. Food-grade	0.3%	0.2%	29
Rigid Poly. Foam Insulation	0.0%	0.0%	0
Pot. Comp. Single-use Food Service	0.1%	0.1%	9
Non-Comp. Single-use Food Service	0.4%	0.2%	43
Other Rigid Packaging	0.3%	0.2%	38
Shopping/Dry Cleaning Bags	0.0%	0.0%	4
Stretch Wrap	0.3%	0.2%	29
Clean Polyethylene Film	0.1%	0.1%	14
Other Film	3.7%	1.4%	415
Plastic Pipe	0.5%	0.7%	54
Foam Carpet Padding	0.0%	0.0%	0
Durable Plastic Products	2.1%	1.2%	229
Plastic/Other Materials	2.0%	1.2%	224
Glass	**2.8%**		**310**
Clear Bottles	0.4%	0.2%	41
Green Bottles	0.5%	0.8%	61
Brown Bottles	0.1%	0.1%	14
Container Glass	0.0%	0.0%	1
Fluorescent Tubes	0.0%	0.0%	1
CFLs	0.0%	0.0%	0
Flat Glass	1.7%	2.6%	185
Automotive Glass	0.0%	0.0%	0
Other Glass	0.1%	0.1%	7
Metal	**4.3%**		**478**
Aluminum Beverage Cans	0.3%	0.2%	29
Aluminum Foil/Containers	0.1%	0.1%	7
Other Aluminum	0.0%	0.0%	1
Other Nonferrous	0.1%	0.1%	9
Steel Food Cans	0.1%	0.1%	16
Empty Aerosol Cans	0.1%	0.1%	15
Other Ferrous	2.0%	1.2%	227
Oil filters	0.1%	0.2%	14
Mixed Metals/Material	1.4%	1.0%	161
Organics	**29.6%**		**3,307**
Leaves and Grass	0.6%	0.6%	62
Prunings	0.0%	0.0%	0
Food	21.6%	9.6%	2,413
Fats, Oils, Grease	0.2%	0.3%	21
Textiles/Clothing	1.9%	1.5%	214
Mixed Textiles	2.8%	2.3%	317
Disposable Diapers	0.6%	0.7%	69
Animal By-products	0.5%	0.6%	58
Rubber Products	1.4%	1.0%	152
Tires	0.0%	0.0%	0

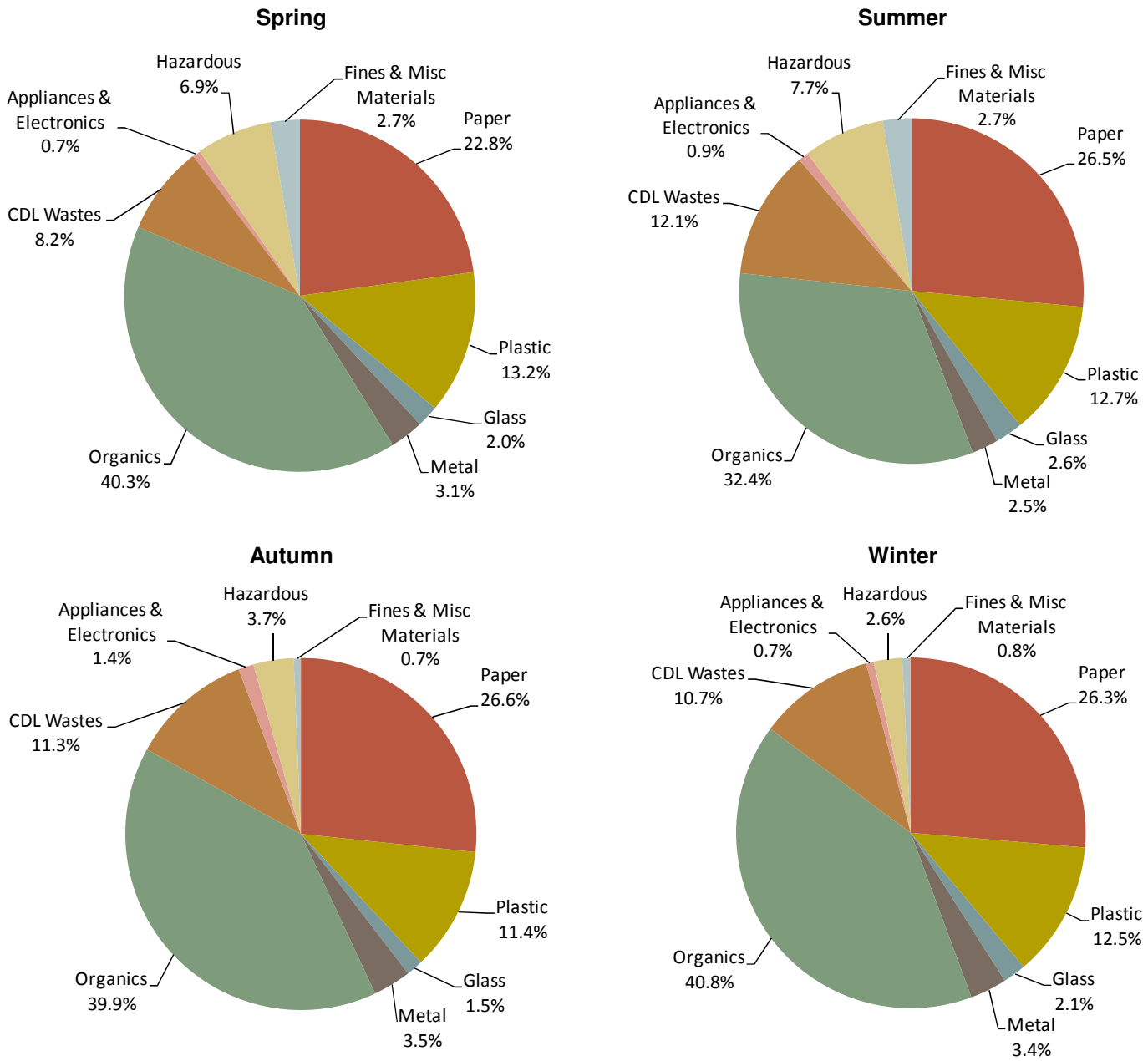
Material	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**0.9%**		**105**
Furniture	0.6%	0.7%	68
Mattresses	0.0%	0.0%	0
Small Appliances	0.1%	0.2%	14
Cell Phones	0.0%	0.0%	0
Audio/Visual Equipment	0.0%	0.0%	0
CRT Monitors	0.2%	0.0%	23
CRT Televisions	0.0%	0.0%	0
Other Electronics	0.0%	0.0%	0
CDL Wastes	**16.8%**		**1,873**
Clean Dimension Lumber	3.2%	2.6%	362
Clean Engineered Wood	0.5%	0.6%	61
Pallets	2.0%	1.1%	220
Crates	0.4%	0.6%	48
Other Untreated Wood	0.1%	0.2%	17
New Painted Wood	0.5%	0.6%	61
Old Painted Wood	0.4%	0.7%	45
Creosote-treated Wood	0.0%	0.0%	1
Other Treated Wood	0.1%	0.1%	9
Contaminated Wood	3.1%	2.2%	350
New Gypsum Scrap	0.0%	0.0%	0
Demo Gypsum Scrap	1.8%	2.6%	198
Carpet	0.4%	0.4%	46
Felt Carpet Pad	0.0%	0.0%	0
Fiberglass Insulation	1.1%	1.7%	119
Concrete	1.2%	2.0%	137
Asphalt Paving	0.0%	0.0%	0
Other Aggregates	0.0%	0.0%	0
Rock	0.1%	0.2%	11
Asphalt Shingles	0.0%	0.0%	2
Other Asphaltic Roofing	0.1%	0.1%	7
Ceramics	0.0%	0.0%	0
Cement Fiber Board	0.0%	0.0%	0
Single-ply Roofing Membranes	0.0%	0.0%	0
Ceiling Tiles	0.0%	0.0%	0
Other Construction	1.6%	1.5%	180
Hazardous	**3.9%**		**438**
Dried Latex Paint	0.0%	0.0%	0
Liquid Latex Paint	0.7%	0.9%	83
Solvent-based Adhesives	0.0%	0.0%	0
Water-based Adhesives	0.0%	0.0%	0
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	0
Pesticides/Herbicides	0.0%	0.0%	0
Rechargeable Batteries	0.0%	0.0%	0
Other Dry-cell Batteries	0.1%	0.1%	10
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil/Diesel Oil	0.0%	0.0%	0
Asbestos	0.0%	0.0%	0
Explosives	0.0%	0.0%	0
Medical Wastes	1.3%	1.6%	140
Other Cleaners/Chemicals	0.0%	0.0%	2
Other Potentially Harmful Waste	1.8%	3.0%	204
Fines and Misc Materials	**4.6%**		**511**
Sand/Soil/Dirt	2.4%	3.2%	266
Non-distinct Fines	0.2%	0.2%	17
Miscellaneous Organics	1.1%	0.3%	125
Miscellaneous Inorganics	0.9%	1.6%	104
Totals	**100%**		**11,170**
Sample Count	36		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

5.2 Commercial Composition by Season

Commercial waste composition results were examined for seasonal variations. Samples were classified into four seasons according to the month in which they were captured: March, April, and May are spring months; June, July, and August are summer; September, October, and November are autumn; and December, January, and February are winter. Figure 5-2 summarizes the results of the broad material categories by season. When summed together, **paper** and **organics** accounted for at least 59% of the total tonnage for each of the four seasons.

Figure 5-2. Commercial Composition Summary: by Season



5.2.1 Spring

A total of 44 samples were captured from commercial loads between the months of March and May 2012. *Food* accounted for approximately 31% of the total tons disposed in the spring. *Compostable/soiled paper*, *other film*, and *medical wastes* were also large components (each more than 5%, by weight). The top ten components, which are listed in Table 5-10, sum to over 68% of the total commercial materials sampled in spring, by weight. Table 5-14 lists the full composition results for commercial waste during this season.

Table 5-10. Top Ten Components: Commercial in Spring
(March – May 2012)

Material	Est. Percent	Cum. Percent
Food	31.3%	31.3%
Compostable/Soiled	7.7%	39.0%
Other Film	6.6%	45.6%
Medical Wastes	6.0%	51.6%
Mixed Low-grade Paper	4.5%	56.1%
Disposable Diapers	3.1%	59.2%
Mixed Textiles	2.5%	61.6%
Plain OCC/Kraft	2.4%	64.1%
Mixed/Other Paper	2.4%	66.4%
Sand/Soil/Dirt	2.2%	68.6%
Total	**68.6%**	

5.2.2 Summer

In the summer, 85 samples were taken from the commercial substream. As shown in Table 5-11, *food* was the single largest component at 26%, by weight, followed by *compostable/soiled paper*, *medical wastes*, *mixed/other paper*, and *other film*. See Table 5-15 for a complete list of the summer composition results.

Table 5-11. Top Ten Components: Commercial in Summer
(June – August 2012)

Material	Est. Percent	Cum. Percent
Food	26.1%	26.1%
Compostable/Soiled	7.2%	33.3%
Medical Wastes	6.4%	39.7%
Mixed/Other Paper	5.8%	45.5%
Other Film	5.0%	50.6%
Mixed Low-grade Paper	4.0%	54.6%
Plain OCC/Kraft	3.3%	57.9%
Non-Comp. Single-use Food Service	2.1%	60.0%
Contaminated Wood	1.9%	61.9%
High-grade Paper	1.8%	63.7%
Total	**63.7%**	

5.2.3 Autumn

Between September and November of 2012, a total of 45 samples were captured from commercial loads. Table 5-12 lists the top ten components of waste disposed in the autumn. *Food* composed about 32% of the total, while *mixed low-grade paper*, *other film*, *mixed/other paper*, and *compostable/soiled paper* each made up at least 5% of the total. When summed together, the top ten components made up approximately 68% of the total waste disposed in the autumn of 2012. Table 5-16 lists the composition results for this season in detail.

Table 5-12. Top Ten Components: Commercial in Autumn
(September – November 2012)

Material	Est. Percent	Cum. Percent
Food	31.7%	31.7%
Mixed Low-grade Paper	5.9%	37.6%
Other Film	5.8%	43.4%
Mixed/Other Paper	5.8%	49.2%
Compostable/Soiled	5.2%	54.3%
Medical Wastes	3.5%	57.8%
Other Construction	2.8%	60.6%
Textiles/Clothing	2.7%	63.3%
Plain OCC/Kraft	2.7%	66.0%
High-grade Paper	2.3%	68.3%
Total	**68.3%**	

5.2.4 Winter

A total of 85 samples were sorted from commercial waste disposed during January, February, and December of 2012. The top ten components are listed in Table 5-13 and sum to 65% of the total commercial waste sampled in winter, by weight. *Food* was the largest component, making up nearly 30% of the total, followed by *compostable/soiled paper* and *other film*, at 8.3% and 5.8%, respectively. Table 5-17 details the full composition results of commercial waste for winter 2012.

Table 5-13. Top Ten Components: Commercial in Winter
(January, February, and December 2012)

Material	Est. Percent	Cum. Percent
Food	29.8%	29.8%
Compostable/Soiled	8.3%	38.1%
Other Film	5.8%	43.9%
Mixed Low-grade Paper	4.5%	48.4%
Mixed/Other Paper	3.7%	52.1%
Plain OCC/Kraft	3.5%	55.7%
Leaves and Grass	2.5%	58.1%
Medical Wastes	2.4%	60.6%
Disposable Diapers	2.4%	62.9%
Non-Comp. Single-use Food Service	2.1%	65.0%
Total	**65.0%**	

5.2.5 Comparisons among Seasons

Food was the largest component of commercial waste disposed in each of the four seasons. *Compostable/soiled paper* was one of the five largest components across all seasons. There were a number of other common components making up the top ten components among the four seasons, including *other film*, *mixed/other paper*, *mixed low-grade paper*, *medical wastes*, and *plain OCC/Kraft*. Several top ten components were specific to individual seasons, including: *sand/soil/dirt* in the spring, *contaminated wood* in the summer, and *textiles/clothing* in the autumn.

Table 5-14. Composition by Weight: Commercial in Spring
(March – May 2012)

Material	Est. Percent	+ / -
Paper	**22.8%**	
Newspaper	1.0%	0.5%
Plain OCC/Kraft	2.4%	0.9%
Waxed OCC	0.3%	0.2%
Grocery/Shopping Bags	0.7%	0.5%
High-grade Paper	1.8%	1.0%
Mixed Low-grade Paper	4.5%	1.2%
Polycoated Containers	0.0%	0.0%
Compostable/Soiled	7.7%	1.7%
Pot. Comp. Single-use Food Service	0.1%	0.2%
Non-Comp. Single-use Food Service	1.9%	0.7%
Mixed/Other Paper	2.4%	0.9%
Plastic	**13.2%**	
#1 PET Bottles	0.5%	0.1%
#2 HDPE Natural Bottles	0.3%	0.1%
#2 HDPE Colored Bottles	0.2%	0.1%
Other Bottles	0.0%	0.0%
Tubs	0.9%	0.4%
Expanded Poly. Non-food	0.1%	0.0%
Expanded Poly. Food-grade	0.3%	0.2%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.4%	0.1%
Other Rigid Packaging	0.5%	0.2%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.4%	0.5%
Clean Polyethylene Film	0.0%	0.0%
Other Film	6.6%	1.5%
Plastic Pipe	0.4%	0.5%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	1.0%	0.6%
Plastic/Other Materials	1.5%	0.8%
Glass	**2.0%**	
Clear Bottles	0.7%	0.2%
Green Bottles	0.4%	0.2%
Brown Bottles	0.6%	0.3%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.1%	0.2%
Automotive Glass	0.0%	0.0%
Other Glass	0.2%	0.1%
Metal	**3.1%**	
Aluminum Beverage Cans	0.3%	0.1%
Aluminum Foil/Containers	0.4%	0.4%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.1%
Steel Food Cans	0.3%	0.2%
Empty Aerosol Cans	0.1%	0.0%
Other Ferrous	1.4%	1.1%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.6%	0.4%
Organics	**40.3%**	
Leaves and Grass	0.7%	0.6%
Prunings	0.0%	0.0%
Food	31.3%	5.7%
Fats, Oils, Grease	0.1%	0.2%
Textiles/Clothing	1.2%	0.7%
Mixed Textiles	2.5%	2.8%
Disposable Diapers	3.1%	2.9%
Animal By-products	1.0%	0.7%
Rubber Products	0.4%	0.2%
Tires	0.0%	0.0%
Appliances and Electronics	**0.7%**	
Furniture	0.2%	0.3%
Mattresses	0.3%	0.3%
Small Appliances	0.1%	0.2%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.0%	0.0%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.1%	0.2%
CDL Wastes	**8.2%**	
Clean Dimension Lumber	1.5%	1.4%
Clean Engineered Wood	1.6%	1.0%
Pallets	1.0%	1.1%
Crates	0.2%	0.2%
Other Untreated Wood	0.1%	0.1%
New Painted Wood	1.1%	0.8%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.3%	0.4%
Contaminated Wood	1.7%	2.3%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.0%	0.0%
Carpet	0.6%	0.6%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.0%	0.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.1%	0.1%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	0.1%	0.2%
Hazardous	**6.9%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.6%	1.0%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	6.0%	3.9%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.3%	0.5%
Fines and Misc Materials	**2.7%**	
Sand/Soil/Dirt	2.2%	3.4%
Non-distinct Fines	0.1%	0.2%
Miscellaneous Organics	0.1%	0.1%
Miscellaneous Inorganics	0.3%	0.2%
Totals	**100%**	
Sample Count	44	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-15. Composition by Weight: Commercial in Summer
(June – August 2012)

Material	Est. Percent	+ / -
Paper	**26.5%**	
Newspaper	1.3%	0.4%
Plain OCC/Kraft	3.3%	0.8%
Waxed OCC	0.4%	0.3%
Grocery/Shopping Bags	0.2%	0.1%
High-grade Paper	1.8%	0.5%
Mixed Low-grade Paper	4.0%	0.8%
Polycoated Containers	0.1%	0.1%
Compostable/Soiled	7.2%	1.5%
Pot. Comp. Single-use Food Service	0.3%	0.2%
Non-Comp. Single-use Food Service	2.1%	0.7%
Mixed/Other Paper	5.8%	2.2%
Plastic	**12.7%**	
#1 PET Bottles	0.8%	0.1%
#2 HDPE Natural Bottles	0.5%	0.3%
#2 HDPE Colored Bottles	0.3%	0.1%
Other Bottles	0.0%	0.0%
Tubs	0.6%	0.2%
Expanded Poly. Non-food	0.2%	0.1%
Expanded Poly. Food-grade	0.2%	0.1%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.9%	0.2%
Other Rigid Packaging	0.9%	0.4%
Shopping/Dry Cleaning Bags	0.1%	0.0%
Stretch Wrap	0.8%	0.5%
Clean Polyethylene Film	0.1%	0.1%
Other Film	5.0%	0.9%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	1.2%	0.8%
Plastic/Other Materials	1.1%	0.6%
Glass	**2.6%**	
Clear Bottles	0.8%	0.3%
Green Bottles	0.2%	0.1%
Brown Bottles	0.4%	0.2%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.8%	1.2%
Automotive Glass	0.0%	0.0%
Other Glass	0.3%	0.2%
Metal	**2.5%**	
Aluminum Beverage Cans	0.3%	0.1%
Aluminum Foil/Containers	0.1%	0.0%
Other Aluminum	0.0%	0.1%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	0.3%	0.1%
Empty Aerosol Cans	0.1%	0.1%
Other Ferrous	1.0%	0.5%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.6%	0.4%
Organics	**32.4%**	
Leaves and Grass	0.8%	0.6%
Prunings	0.0%	0.0%
Food	26.1%	4.3%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	0.8%	0.4%
Mixed Textiles	1.5%	1.0%
Disposable Diapers	1.5%	1.0%
Animal By-products	1.0%	0.7%
Rubber Products	0.7%	0.4%
Tires	0.0%	0.0%

Material	Est. Percent	+ / -
Appliances and Electronics	**0.9%**	
Furniture	0.5%	0.5%
Mattresses	0.0%	0.0%
Small Appliances	0.2%	0.2%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.0%	0.0%
CRT Monitors	0.1%	0.1%
CRT Televisions	0.2%	0.3%
Other Electronics	0.0%	0.0%
CDL Wastes	**12.1%**	
Clean Dimension Lumber	1.4%	1.0%
Clean Engineered Wood	0.7%	0.5%
Pallets	1.5%	1.1%
Crates	0.8%	1.2%
Other Untreated Wood	0.0%	0.0%
New Painted Wood	0.3%	0.3%
Old Painted Wood	0.2%	0.3%
Creosote-treated Wood	0.5%	0.7%
Other Treated Wood	0.1%	0.1%
Contaminated Wood	1.9%	1.5%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.4%	0.4%
Carpet	0.2%	0.1%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	1.3%	1.6%
Asphalt Paving	0.0%	0.0%
Other Aggregates	1.7%	1.7%
Rock	0.3%	0.4%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.2%	0.2%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	0.6%	0.7%
Hazardous	**7.7%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.1%	0.2%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.4%	0.7%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.1%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	6.4%	3.4%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.7%	1.2%
Fines and Misc Materials	**2.7%**	
Sand/Soil/Dirt	0.4%	0.4%
Non-distinct Fines	0.4%	0.5%
Miscellaneous Organics	0.8%	0.5%
Miscellaneous Inorganics	1.1%	1.1%
Totals	**100%**	
Sample Count	85	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-16. Composition by Weight: Commercial in Autumn
(September – November 2012)

Material	Est. Percent	+ / -
Paper	**26.6%**	
Newspaper	1.5%	0.7%
Plain OCC/Kraft	2.7%	0.8%
Waxed OCC	1.4%	1.3%
Grocery/Shopping Bags	0.1%	0.1%
High-grade Paper	2.3%	0.7%
Mixed Low-grade Paper	5.9%	1.6%
Polycoated Containers	0.3%	0.2%
Compostable/Soiled	5.2%	1.3%
Pot. Comp. Single-use Food Service	0.1%	0.1%
Non-Comp. Single-use Food Service	1.4%	0.7%
Mixed/Other Paper	5.8%	1.5%
Plastic	**11.4%**	
#1 PET Bottles	0.8%	0.2%
#2 HDPE Natural Bottles	0.3%	0.1%
#2 HDPE Colored Bottles	0.1%	0.1%
Other Bottles	0.1%	0.1%
Tubs	0.2%	0.1%
Expanded Poly. Non-food	0.1%	0.0%
Expanded Poly. Food-grade	0.0%	0.0%
Rigid Poly. Foam Insulation	0.1%	0.1%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.4%	0.2%
Other Rigid Packaging	0.5%	0.2%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.2%	0.2%
Clean Polyethylene Film	0.1%	0.1%
Other Film	5.8%	2.9%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	1.5%	1.1%
Plastic/Other Materials	1.1%	0.5%
Glass	**1.5%**	
Clear Bottles	0.3%	0.1%
Green Bottles	0.7%	0.8%
Brown Bottles	0.2%	0.1%
Container Glass	0.1%	0.1%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.1%	0.1%
Automotive Glass	0.0%	0.0%
Other Glass	0.2%	0.3%
Metal	**3.5%**	
Aluminum Beverage Cans	0.6%	0.2%
Aluminum Foil/Containers	0.1%	0.0%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.3%	0.3%
Steel Food Cans	0.5%	0.2%
Empty Aerosol Cans	0.1%	0.1%
Other Ferrous	0.9%	0.9%
Oil filters	0.1%	0.1%
Mixed Metals/Material	0.9%	0.5%
Organics	**39.9%**	
Leaves and Grass	0.2%	0.2%
Prunings	0.0%	0.0%
Food	31.7%	5.3%
Fats, Oils, Grease	0.2%	0.3%
Textiles/Clothing	2.7%	1.7%
Mixed Textiles	1.3%	0.8%
Disposable Diapers	1.0%	0.7%
Animal By-products	1.3%	1.3%
Rubber Products	1.6%	1.3%
Tires	0.0%	0.0%
Appliances and Electronics	**1.4%**	
Furniture	0.5%	0.6%
Mattresses	0.0%	0.0%
Small Appliances	0.3%	0.4%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.1%	0.1%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.5%	0.8%
CDL Wastes	**11.3%**	
Clean Dimension Lumber	0.9%	0.8%
Clean Engineered Wood	0.2%	0.2%
Pallets	1.9%	1.8%
Crates	0.1%	0.2%
Other Untreated Wood	0.1%	0.1%
New Painted Wood	0.0%	0.0%
Old Painted Wood	0.7%	0.7%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.4%	0.5%
Contaminated Wood	0.9%	0.7%
New Gypsum Scrap	0.0%	0.1%
Demo Gypsum Scrap	1.1%	1.4%
Carpet	0.5%	0.5%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.8%	1.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.7%	0.9%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	2.8%	2.9%
Hazardous	**3.7%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.1%	0.1%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.1%	0.2%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	3.5%	3.3%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**0.7%**	
Sand/Soil/Dirt	0.0%	0.0%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	0.4%	0.3%
Miscellaneous Inorganics	0.2%	0.2%
Totals	**100%**	
Sample Count	45	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-17. Composition by Weight: Commercial in Winter
(January, February, and December 2012)

Material	Est. Percent	+ / -
Paper	**26.3%**	
Newspaper	1.5%	0.5%
Plain OCC/Kraft	3.5%	1.0%
Waxed OCC	0.6%	0.4%
Grocery/Shopping Bags	0.4%	0.1%
High-grade Paper	1.4%	0.5%
Mixed Low-grade Paper	4.5%	0.7%
Polycoated Containers	0.1%	0.1%
Compostable/Soiled	8.3%	1.5%
Pot. Comp. Single-use Food Service	0.3%	0.2%
Non-Comp. Single-use Food Service	2.1%	0.6%
Mixed/Other Paper	3.7%	1.2%
Plastic	**12.5%**	
#1 PET Bottles	0.6%	0.1%
#2 HDPE Natural Bottles	0.3%	0.1%
#2 HDPE Colored Bottles	0.2%	0.1%
Other Bottles	0.0%	0.0%
Tubs	0.6%	0.1%
Expanded Poly. Non-food	0.4%	0.2%
Expanded Poly. Food-grade	0.1%	0.1%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.1%	0.1%
Non-Comp. Single-use Food Service	0.8%	0.2%
Other Rigid Packaging	0.4%	0.1%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.2%	0.1%
Clean Polyethylene Film	0.3%	0.2%
Other Film	5.8%	0.8%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	1.1%	0.4%
Plastic/Other Materials	1.5%	0.5%
Glass	**2.1%**	
Clear Bottles	0.6%	0.2%
Green Bottles	0.4%	0.1%
Brown Bottles	0.5%	0.2%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.1%	0.1%
Automotive Glass	0.0%	0.0%
Other Glass	0.6%	0.5%
Metal	**3.4%**	
Aluminum Beverage Cans	0.3%	0.1%
Aluminum Foil/Containers	0.1%	0.0%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	0.4%	0.1%
Empty Aerosol Cans	0.1%	0.0%
Other Ferrous	1.9%	0.8%
Oil filters	0.0%	0.1%
Mixed Metals/Material	0.7%	0.3%
Organics	**40.8%**	
Leaves and Grass	2.5%	1.4%
Prunings	0.0%	0.1%
Food	29.8%	4.2%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	1.8%	0.9%
Mixed Textiles	1.6%	0.8%
Disposable Diapers	2.4%	1.1%
Animal By-products	1.2%	0.6%
Rubber Products	1.2%	0.7%
Tires	0.3%	0.6%

Material	Est. Percent	+ / -
Appliances and Electronics	**0.7%**	
Furniture	0.2%	0.3%
Mattresses	0.0%	0.0%
Small Appliances	0.0%	0.0%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.2%	0.2%
CRT Monitors	0.1%	0.2%
CRT Televisions	0.0%	0.0%
Other Electronics	0.2%	0.2%
CDL Wastes	**10.7%**	
Clean Dimension Lumber	0.7%	0.4%
Clean Engineered Wood	0.8%	0.8%
Pallets	1.3%	1.2%
Crates	0.3%	0.3%
Other Untreated Wood	0.0%	0.1%
New Painted Wood	0.7%	0.5%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.3%	0.2%
Contaminated Wood	2.1%	1.5%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.8%	0.7%
Carpet	0.4%	0.4%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.4%	0.5%
Concrete	0.7%	1.2%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	0.1%	0.1%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.8%	1.1%
Cement Fiber Board	0.2%	0.3%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	1.2%	1.4%
Hazardous	**2.6%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.0%	0.0%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.1%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	2.4%	2.3%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.1%
Fines and Misc Materials	**0.8%**	
Sand/Soil/Dirt	0.2%	0.2%
Non-distinct Fines	0.1%	0.1%
Miscellaneous Organics	0.5%	0.4%
Miscellaneous Inorganics	0.1%	0.1%
Totals	**100%**	
Sample Count	85	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

5.3 Commercial Composition by Generator Type

Commercial drivers were asked to identify from which type of business they had collected the sample load.[10] Since commercial garbage trucks often haul waste from a variety of different business types, most samples are of the *mixed generator type*. The remaining generator-specific analyses are based on a very small number of samples and are thus subject to a relatively wide margin of error. These results provide rough estimates only.

This section first presents the top ten components for each of the 12 commercial generator types. The detailed composition tables for each commercial generator group follow the top ten tables.

5.3.1 Construction, Demolition, & Landclearing

A total of two *CDL* loads were sampled. As shown in Table 5-18, the top ten components accounted for an estimated 78% of the tonnage. The two largest components, *contaminated wood* and *other construction*, accounted for about 13% and 12% of the total, respectively. Table 5-30 shows the detailed composition results for the samples taken from *CDL* generators.

Table 5-18. Top Ten Components: Construction, Demolition, & Landclearing
(January – December 2012)

Material	Est. Percent	Cum. Percent
Contaminated Wood	13.0%	13.0%
Other Construction	12.3%	25.2%
Plastic/Other Materials	10.6%	35.9%
Fiberglass Insulation	10.4%	46.3%
Clean Dimension Lumber	7.5%	53.7%
Crates	7.3%	61.0%
Carpet	4.7%	65.7%
Other Film	4.5%	70.2%
Compostable/Soiled	4.1%	74.3%
Plain OCC/Kraft	3.7%	78.0%
Total	**78.0%**	

5.3.2 Education

A total of four loads from *educational* institutions were sampled. As shown in Table 5-19, the top ten components summed to over 89% of the total materials in the *education* samples, with *contaminated wood* at approximately one-third of this waste, and *food* composing about 21% of the total. Table 5-31 shows the detailed composition results for the samples taken from educational institutions.

[10] These generator types are categorized by Standard Industry Codes (SIC) in Appendix B.

Table 5-19. Top Ten Components: Education
(January – December 2012)

Material	Est. Percent	Cum. Percent
Contaminated Wood	31.9%	31.9%
Food	20.6%	52.4%
Compostable/Soiled	12.2%	64.6%
Mixed Low-grade Paper	8.6%	73.2%
Mixed/Other Paper	3.9%	77.2%
Non-Comp. Single-use Food Service	3.7%	80.9%
Other Film	2.5%	83.5%
Other Rigid Packaging	2.1%	85.6%
New Painted Wood	2.0%	87.6%
Tubs	1.5%	89.1%
Total	**89.1%**	

5.3.3 Health Care

A total of 21 loads from *health care* facilities were sampled. As shown in Table 5-20, the top ten components accounted for a combined total of more than 88% of the *health care* waste. The largest components were *medical wastes* at 45%, and *food* at nearly 16% of the total. Table 5-32 shows the detailed composition results for the samples taken from *health care* facilities.

Table 5-20. Top Ten Components: Health Care
(January – December 2012)

Material	Est. Percent	Cum. Percent
Medical Wastes	45.2%	45.2%
Food	15.8%	60.9%
Disposable Diapers	6.3%	67.3%
Compostable/Soiled	5.2%	72.4%
Other Film	3.5%	75.9%
Other Potentially Harmful Waste	3.3%	79.2%
Mixed/Other Paper	2.8%	82.0%
Mixed Low-grade Paper	2.6%	84.6%
Plain OCC/Kraft	2.3%	86.9%
High-grade Paper	1.7%	88.5%
Total	**88.5%**	

5.3.4 Hotel/Motel

A total of six loads were sampled from *hotel/motel* generators. As shown in Table 5-21, the top ten components in the stream were more than 76% of the total. *Food* made up about 18% of waste from *hotel/motel* generators, by weight. Table 5-33 shows the detailed composition results for the samples taken from these generators.

Table 5-21. Top Ten Components: Hotel/Motel
(January – December 2012)

Material	Est. Percent	Cum. Percent
Food	17.5%	17.5%
Mixed/Other Paper	11.1%	28.7%
Concrete	10.5%	39.2%
Mixed Low-grade Paper	8.2%	47.4%
Compostable/Soiled	7.2%	54.6%
Newspaper	5.8%	60.3%
Pesticides/Herbicides	5.1%	65.4%
Other Film	4.6%	70.0%
Plain OCC/Kraft	3.3%	73.4%
High-grade Paper	2.9%	76.3%
Total	**76.3%**	

5.3.5 Manufacturing

A total of seven loads from *manufacturing* businesses were sampled. As shown in Table 5-22, the top ten components accounted for a combined total of more than 68% of the tonnage. *Other film* made up over 14% of waste from *manufacturing* businesses, by weight, followed by *food* at approximately 12%. Table 5-34 shows the detailed composition results for the samples taken from these businesses.

Table 5-22. Top Ten Components: Manufacturing
(January – December 2012)

Material	Est. Percent	Cum. Percent
Other Film	14.5%	14.5%
Food	12.3%	26.8%
Mixed Textiles	9.8%	36.6%
Durable Plastic Products	6.3%	42.9%
Demo Gypsum Scrap	5.7%	48.7%
Mixed/Other Paper	5.4%	54.1%
Contaminated Wood	4.0%	58.1%
Non-distinct Fines	3.6%	61.7%
Clean Dimension Lumber	3.4%	65.1%
Textiles/Clothing	3.2%	68.3%
Total	**68.3%**	

5.3.6 Office

A total of 15 samples were taken from *office* waste loads. As shown in Table 5-23, the top ten components accounted for a combined total of about 80% of the tonnage from these loads. *Food* and *compostable/soiled paper* were the two most prevalent components from this generator group, at 21.8% and 14.7%, respectively. Table 5-35 shows the detailed composition results for the samples taken from *office* waste loads.

Table 5-23. Top Ten Components: Office
(January – December 2012)

Material	Est. Percent	Cum. Percent
Food	21.8%	21.8%
Compostable/Soiled	14.7%	36.5%
Mixed/Other Paper	8.0%	44.6%
Mixed Low-grade Paper	7.0%	51.6%
Non-Comp. Single-use Food Service	6.2%	57.8%
Other Film	6.0%	63.8%
Mixed Textiles	5.3%	69.1%
Medical Wastes	4.0%	73.1%
High-grade Paper	3.6%	76.7%
Pallets	2.9%	79.6%
Total	**79.6%**	

5.3.7 Other Services

A total of 19 samples were taken from *other services* loads. As shown in Table 5-24, the top ten components accounted for a combined total of about 65% of the tonnage, with *food* the most common component in the stream (18.5%). *Compostable/soiled paper, mixed/other paper,* and *other film* were also prevalent in the selected samples from this generator type. Table 5-36 shows the detailed composition results for the samples taken from *other services* loads.

Table 5-24. Top Ten Components: Other Services
(January – December 2012)

Material	Est. Percent	Cum. Percent
Food	18.5%	18.5%
Compostable/Soiled	9.7%	28.2%
Mixed/Other Paper	6.9%	35.1%
Other Film	5.3%	40.4%
Mixed Low-grade Paper	4.9%	45.3%
Sand/Soil/Dirt	4.6%	50.0%
Plain OCC/Kraft	4.4%	54.4%
Non-Comp. Single-use Food Service	4.1%	58.4%
Other Construction	3.9%	62.3%
Flat Glass	3.0%	65.3%
Total	**65.3%**	

5.3.8 Restaurants

A total of three samples were taken from *restaurant* loads. As shown in Table 5-25, the top ten components accounted for a combined total of almost 95% of the tonnage. *Food* made up over 53%, by weight, of *restaurant* waste. Table 5-37 shows the detailed composition results for the samples taken from *restaurant* loads.

Table 5-25. Top Ten Components: Restaurants
(January – December 2012)

Material	Est. Percent	Cum. Percent
Food	53.4%	53.4%
Mixed/Other Paper	10.3%	63.7%
Compostable/Soiled	8.8%	72.5%
Other Rigid Packaging	5.3%	77.8%
Plain OCC/Kraft	4.0%	81.8%
Other Film	3.4%	85.2%
Tubs	3.0%	88.2%
Non-Comp. Single-use Food Service	2.5%	90.8%
Mixed Low-grade Paper	2.2%	92.9%
Contaminated Wood	1.5%	94.5%
Total	**94.5%**	

5.3.9 Retail

A total of 38 samples were taken from *retail* business loads. As shown in Table 5-26, the top ten components accounted for a combined total of about two-thirds of the tonnage. *Food* made up nearly one-third of *retail* waste, by weight. Table 5-38 shows the detailed composition results for the samples taken from *retail* loads.

Table 5-26. Top Ten Components: Retail
(January – December 2012)

Material	Est. Percent	Cum. Percent
Food	30.5%	30.5%
Other Film	5.7%	36.3%
Plain OCC/Kraft	4.8%	41.1%
Mixed Low-grade Paper	4.7%	45.8%
Mixed/Other Paper	4.3%	50.1%
Compostable/Soiled	4.2%	54.3%
Other Ferrous	3.6%	57.9%
Contaminated Wood	3.3%	61.2%
Durable Plastic Products	2.6%	63.8%
Textiles/Clothing	2.6%	66.4%
Total	**66.4%**	

5.3.10 Transportation

A total of eight samples were taken from the *transportation* industry. As shown in Table 5-27, the top ten components accounted for a combined total of about 66% of the tonnage, with *food* and *pallets* the most common components at 11.7% of the total each. Table 5-39 shows the detailed composition results for the samples taken from the *transportation* loads.

Table 5-27. Top Ten Components: Transportation
(January – December 2012)

Material	Est. Percent	Cum. Percent
Food	11.7%	11.7%
Pallets	11.7%	23.4%
Rubber Products	8.5%	31.9%
Plain OCC/Kraft	7.3%	39.2%
Compostable/Soiled	6.4%	45.6%
Mixed Low-grade Paper	5.3%	50.8%
Clean Dimension Lumber	5.0%	55.9%
Other Film	4.2%	60.1%
Mixed/Other Paper	3.0%	63.0%
Mixed Metals/Material	2.9%	65.9%
Total	**65.9%**	

5.3.11 Wholesale

A total of six samples were taken from *wholesale* establishments. As shown in Table 5-28, the top ten components in the *wholesale* stream made up 94% of the stream, by weight. *Food* was the most prevalent component, and accounted for approximately 55% of the *wholesale* waste. Table 5-40 shows the detailed composition results for the samples taken from *wholesale* establishments.

Table 5-28. Top Ten Components: Wholesale
(January – December 2012)

Material	Est. Percent	Cum. Percent
Food	55.4%	55.4%
Other Film	14.7%	70.1%
Mixed/Other Paper	7.7%	77.8%
Compostable/Soiled	4.3%	82.1%
Plain OCC/Kraft	3.2%	85.3%
Waxed OCC	3.0%	88.2%
Non-Comp. Single-use Food Service	2.0%	90.2%
Mixed Low-grade Paper	1.8%	92.0%
Mixed Textiles	1.0%	93.0%
Non-Comp. Single-use Food Service	1.0%	94.0%
Total	**94.0%**	

5.3.12 Mixed Commercial Generators

A total of 128 samples were taken from *mixed commercial generator* loads. Table 5-29 lists the top ten materials in the stream, by weight. These materials account for over two-thirds of the components in the stream, with *food* composing nearly 36% of the waste from these loads. Table 5-41 shows the detailed composition results for the samples taken from *mixed commercial generator* loads.

Table 5-29. Top Ten Components: Mixed Commercial Generators
(January – December 2012)

Material	Est. Percent	Cum. Percent
Food	35.8%	35.8%
Compostable/Soiled	7.6%	43.5%
Other Film	5.5%	49.0%
Mixed Low-grade Paper	4.6%	53.6%
Mixed/Other Paper	3.6%	57.2%
Disposable Diapers	2.6%	59.8%
Plain OCC/Kraft	2.2%	62.0%
Textiles/Clothing	1.9%	63.9%
Leaves and Grass	1.8%	65.6%
Animal By-products	1.7%	67.3%
Total	**67.3%**	

5.3.13 Comparisons among Generator Types

Food, *other film*, and *mixed other paper* were among the top ten components disposed by all generator types, except *CDL* generators. On the other hand, *other rigid packaging* from *education* generators, and *fiberglass insulation* from *CDL* generators were among the top ten components only in these generator groups.

Table 5-30. Composition by Weight: Construction, Demolition & Landclearing
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**13.2%**	
Newspaper	0.7%	0.8%
Plain OCC/Kraft	3.7%	4.3%
Waxed OCC	0.5%	1.2%
Grocery/Shopping Bags	0.0%	0.0%
High-grade Paper	0.9%	1.0%
Mixed Low-grade Paper	1.8%	2.1%
Polycoated Containers	0.0%	0.0%
Compostable/Soiled	4.1%	4.7%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.2%	0.2%
Mixed/Other Paper	1.3%	1.4%
Plastic	**22.6%**	
#1 PET Bottles	0.1%	0.2%
#2 HDPE Natural Bottles	0.1%	0.2%
#2 HDPE Colored Bottles	0.9%	1.0%
Other Bottles	0.0%	0.0%
Tubs	0.5%	0.9%
Expanded Poly. Non-food	1.1%	1.2%
Expanded Poly. Food-grade	1.1%	1.3%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.4%	0.5%
Other Rigid Packaging	0.2%	0.3%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.0%	0.0%
Clean Polyethylene Film	0.0%	0.0%
Other Film	4.5%	1.8%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	3.0%	2.7%
Plastic/Other Materials	10.6%	8.9%
Glass	**0.0%**	
Clear Bottles	0.0%	0.0%
Green Bottles	0.0%	0.0%
Brown Bottles	0.0%	0.0%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.0%	0.0%
Automotive Glass	0.0%	0.0%
Other Glass	0.0%	0.0%
Metal	**0.4%**	
Aluminum Beverage Cans	0.0%	0.0%
Aluminum Foil/Containers	0.0%	0.0%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	0.4%	0.4%
Empty Aerosol Cans	0.0%	0.0%
Other Ferrous	0.0%	0.0%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.0%	0.0%
Organics	**1.8%**	
Leaves and Grass	0.0%	0.0%
Prunings	0.0%	0.0%
Food	1.2%	1.4%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	0.1%	0.2%
Mixed Textiles	0.4%	0.5%
Disposable Diapers	0.0%	0.0%
Animal By-products	0.0%	0.0%
Rubber Products	0.0%	0.0%
Tires	0.0%	0.0%

Material	Est. Percent	+ / -
Appliances and Electronics	**0.0%**	
Furniture	0.0%	0.0%
Mattresses	0.0%	0.0%
Small Appliances	0.0%	0.0%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.0%	0.0%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.0%	0.0%
CDL Wastes	**61.7%**	
Clean Dimension Lumber	7.5%	3.7%
Clean Engineered Wood	0.0%	0.0%
Pallets	0.0%	0.0%
Crates	7.3%	8.4%
Other Untreated Wood	0.0%	0.0%
New Painted Wood	0.9%	1.8%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	0.1%	0.1%
Other Treated Wood	1.5%	1.8%
Contaminated Wood	13.0%	21.8%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	2.0%	2.3%
Carpet	4.7%	5.5%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	10.4%	21.7%
Concrete	0.0%	0.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	2.0%	2.3%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	12.3%	14.2%
Hazardous	**0.4%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.0%	0.0%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	0.0%	0.0%
Other Cleaners/Chemicals	0.4%	0.4%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**0.0%**	
Sand/Soil/Dirt	0.0%	0.0%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	0.0%	0.0%
Miscellaneous Inorganics	0.0%	0.0%
Totals	**100%**	
Sample Count	2	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-31. Composition by Weight: Education
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**30.9%**	
Newspaper	0.8%	1.1%
Plain OCC/Kraft	0.7%	0.4%
Waxed OCC	0.0%	0.0%
Grocery/Shopping Bags	0.1%	0.2%
High-grade Paper	0.7%	0.8%
Mixed Low-grade Paper	8.6%	6.1%
Polycoated Containers	0.0%	0.0%
Compostable/Soiled	12.2%	10.1%
Pot. Comp. Single-use Food Service	0.2%	0.3%
Non-Comp. Single-use Food Service	3.7%	1.8%
Mixed/Other Paper	3.9%	3.3%
Plastic	**9.0%**	
#1 PET Bottles	0.8%	0.3%
#2 HDPE Natural Bottles	0.1%	0.1%
#2 HDPE Colored Bottles	0.1%	0.1%
Other Bottles	0.0%	0.0%
Tubs	1.5%	1.6%
Expanded Poly. Non-food	0.3%	0.5%
Expanded Poly. Food-grade	0.1%	0.1%
Rigid Poly. Foam Insulation	0.2%	0.4%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.7%	0.3%
Other Rigid Packaging	2.1%	3.3%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.0%	0.0%
Clean Polyethylene Film	0.0%	0.0%
Other Film	2.5%	1.3%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	0.5%	0.7%
Plastic/Other Materials	0.1%	0.2%
Glass	**1.1%**	
Clear Bottles	0.5%	0.3%
Green Bottles	0.0%	0.1%
Brown Bottles	0.1%	0.1%
Container Glass	0.1%	0.2%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.2%	0.3%
Automotive Glass	0.0%	0.0%
Other Glass	0.2%	0.4%
Metal	**1.0%**	
Aluminum Beverage Cans	0.4%	0.4%
Aluminum Foil/Containers	0.0%	0.0%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	0.1%	0.2%
Empty Aerosol Cans	0.0%	0.0%
Other Ferrous	0.4%	0.5%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.0%	0.0%
Organics	**23.3%**	
Leaves and Grass	0.7%	1.1%
Prunings	0.0%	0.0%
Food	20.6%	11.3%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	0.0%	0.0%
Mixed Textiles	0.1%	0.2%
Disposable Diapers	0.6%	1.0%
Animal By-products	0.0%	0.0%
Rubber Products	1.3%	2.0%
Tires	0.0%	0.0%

Material	Est. Percent	+ / -
Appliances and Electronics	**0.0%**	
Furniture	0.0%	0.0%
Mattresses	0.0%	0.0%
Small Appliances	0.0%	0.0%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.0%	0.0%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.0%	0.0%
CDL Wastes	**34.6%**	
Clean Dimension Lumber	0.6%	0.9%
Clean Engineered Wood	0.1%	0.1%
Pallets	0.0%	0.0%
Crates	0.0%	0.0%
Other Untreated Wood	0.0%	0.0%
New Painted Wood	2.0%	3.2%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.0%	0.0%
Contaminated Wood	31.9%	28.7%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.0%	0.0%
Carpet	0.0%	0.0%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.0%	0.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	0.0%	0.0%
Hazardous	**0.0%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.0%	0.0%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	0.0%	0.0%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**0.0%**	
Sand/Soil/Dirt	0.0%	0.0%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	0.0%	0.0%
Miscellaneous Inorganics	0.0%	0.0%
Totals	**100%**	
Sample Count	4	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-32. Composition by Weight: Health Care
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**16.2%**	
Newspaper	0.2%	0.1%
Plain OCC/Kraft	2.3%	1.4%
Waxed OCC	0.0%	0.0%
Grocery/Shopping Bags	0.0%	0.0%
High-grade Paper	1.7%	0.8%
Mixed Low-grade Paper	2.6%	0.8%
Polycoated Containers	0.3%	0.4%
Compostable/Soiled	5.2%	1.9%
Pot. Comp. Single-use Food Service	0.1%	0.1%
Non-Comp. Single-use Food Service	1.2%	0.7%
Mixed/Other Paper	2.8%	1.5%
Plastic	**6.8%**	
#1 PET Bottles	0.3%	0.1%
#2 HDPE Natural Bottles	0.2%	0.1%
#2 HDPE Colored Bottles	0.1%	0.0%
Other Bottles	0.0%	0.0%
Tubs	0.3%	0.2%
Expanded Poly. Non-food	0.1%	0.1%
Expanded Poly. Food-grade	0.2%	0.2%
Rigid Poly. Foam Insulation	0.0%	0.1%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.6%	0.3%
Other Rigid Packaging	0.5%	0.5%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.0%	0.0%
Clean Polyethylene Film	0.0%	0.1%
Other Film	3.5%	0.8%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	0.4%	0.2%
Plastic/Other Materials	0.3%	0.3%
Glass	**0.5%**	
Clear Bottles	0.2%	0.1%
Green Bottles	0.0%	0.0%
Brown Bottles	0.2%	0.3%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.0%	0.0%
Automotive Glass	0.0%	0.0%
Other Glass	0.1%	0.1%
Metal	**0.8%**	
Aluminum Beverage Cans	0.2%	0.1%
Aluminum Foil/Containers	0.1%	0.1%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	0.1%	0.1%
Empty Aerosol Cans	0.1%	0.1%
Other Ferrous	0.3%	0.3%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.0%	0.0%
Organics	**23.8%**	
Leaves and Grass	0.0%	0.0%
Prunings	0.0%	0.0%
Food	15.8%	7.1%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	0.2%	0.3%
Mixed Textiles	1.1%	1.1%
Disposable Diapers	6.3%	6.4%
Animal By-products	0.0%	0.0%
Rubber Products	0.4%	0.2%
Tires	0.0%	0.0%
Appliances and Electronics	**0.4%**	
Furniture	0.0%	0.0%
Mattresses	0.0%	0.0%
Small Appliances	0.0%	0.0%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.1%	0.1%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.3%	0.6%
CDL Wastes	**2.2%**	
Clean Dimension Lumber	0.6%	0.9%
Clean Engineered Wood	0.0%	0.0%
Pallets	0.1%	0.2%
Crates	0.0%	0.0%
Other Untreated Wood	0.0%	0.0%
New Painted Wood	0.0%	0.0%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.0%	0.0%
Contaminated Wood	0.3%	0.5%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	1.2%	1.8%
Carpet	0.0%	0.0%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.0%	0.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	0.0%	0.0%
Hazardous	**48.5%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.0%	0.0%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.1%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	45.2%	10.7%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	3.3%	4.5%
Fines and Misc Materials	**0.7%**	
Sand/Soil/Dirt	0.0%	0.0%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	0.7%	1.0%
Miscellaneous Inorganics	0.0%	0.0%
Totals	**100%**	
Sample Count	21	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-33. Composition by Weight: Hotel/Motel
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**40.6%**	
Newspaper	5.8%	4.3%
Plain OCC/Kraft	3.3%	2.5%
Waxed OCC	0.0%	0.0%
Grocery/Shopping Bags	0.9%	0.7%
High-grade Paper	2.9%	3.4%
Mixed Low-grade Paper	8.2%	3.8%
Polycoated Containers	0.0%	0.0%
Compostable/Soiled	7.2%	4.2%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	1.2%	0.8%
Mixed/Other Paper	11.1%	10.7%
Plastic	**8.5%**	
#1 PET Bottles	1.0%	0.7%
#2 HDPE Natural Bottles	0.4%	0.4%
#2 HDPE Colored Bottles	0.1%	0.2%
Other Bottles	0.0%	0.0%
Tubs	0.4%	0.2%
Expanded Poly. Non-food	0.2%	0.2%
Expanded Poly. Food-grade	0.1%	0.1%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.3%	0.3%
Other Rigid Packaging	0.5%	0.8%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.0%	0.0%
Clean Polyethylene Film	0.0%	0.0%
Other Film	4.6%	1.9%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	0.3%	0.3%
Plastic/Other Materials	0.5%	0.8%
Glass	**5.3%**	
Clear Bottles	2.6%	2.9%
Green Bottles	0.7%	0.7%
Brown Bottles	2.0%	1.6%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.0%	0.0%
Automotive Glass	0.0%	0.0%
Other Glass	0.0%	0.0%
Metal	**3.1%**	
Aluminum Beverage Cans	0.5%	0.4%
Aluminum Foil/Containers	0.2%	0.2%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	1.3%	1.3%
Empty Aerosol Cans	0.1%	0.1%
Other Ferrous	0.7%	0.9%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.3%	0.4%
Organics	**21.5%**	
Leaves and Grass	1.3%	1.2%
Prunings	0.0%	0.0%
Food	17.5%	12.5%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	1.7%	0.9%
Mixed Textiles	0.9%	1.1%
Disposable Diapers	0.0%	0.0%
Animal By-products	0.0%	0.0%
Rubber Products	0.0%	0.0%
Tires	0.0%	0.0%

+ / -	Est. Percent	+ / -
Appliances and Electronics	**0.0%**	
Furniture	0.0%	0.0%
Mattresses	0.0%	0.0%
Small Appliances	0.0%	0.0%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.0%	0.0%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.0%	0.0%
CDL Wastes	**15.6%**	
Clean Dimension Lumber	0.6%	0.7%
Clean Engineered Wood	0.0%	0.1%
Pallets	0.2%	0.3%
Crates	0.5%	0.8%
Other Untreated Wood	0.0%	0.0%
New Painted Wood	0.8%	1.3%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.0%	0.0%
Contaminated Wood	2.2%	3.7%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.0%	0.0%
Carpet	0.0%	0.0%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.6%	1.0%
Concrete	10.5%	17.5%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	0.0%	0.0%
Asphalt Shingles	0.1%	0.2%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	0.0%	0.0%
Hazardous	**5.1%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.0%	0.0%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	5.1%	8.6%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	0.0%	0.0%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**0.3%**	
Sand/Soil/Dirt	0.0%	0.0%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	0.3%	0.4%
Miscellaneous Inorganics	0.0%	0.0%
Totals	**100%**	
Sample Count	6	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-34. Composition by Weight: Manufacturing
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**14.6%**	
Newspaper	0.1%	0.1%
Plain OCC/Kraft	1.6%	1.0%
Waxed OCC	0.0%	0.0%
Grocery/Shopping Bags	0.0%	0.0%
High-grade Paper	1.8%	1.7%
Mixed Low-grade Paper	3.1%	3.4%
Polycoated Containers	0.0%	0.0%
Compostable/Soiled	2.1%	1.9%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.5%	0.5%
Mixed/Other Paper	5.4%	3.9%
Plastic	**26.0%**	
#1 PET Bottles	0.3%	0.3%
#2 HDPE Natural Bottles	0.0%	0.0%
#2 HDPE Colored Bottles	0.1%	0.1%
Other Bottles	0.0%	0.0%
Tubs	0.5%	0.5%
Expanded Poly. Non-food	0.0%	0.1%
Expanded Poly. Food-grade	0.0%	0.1%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.2%	0.2%
Other Rigid Packaging	0.2%	0.3%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	2.8%	4.6%
Clean Polyethylene Film	0.4%	0.7%
Other Film	14.5%	20.5%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	6.3%	8.1%
Plastic/Other Materials	0.4%	0.4%
Glass	**2.0%**	
Clear Bottles	0.3%	0.4%
Green Bottles	0.0%	0.0%
Brown Bottles	0.2%	0.3%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.9%	1.5%
Automotive Glass	0.0%	0.0%
Other Glass	0.6%	1.0%
Metal	**5.4%**	
Aluminum Beverage Cans	0.3%	0.3%
Aluminum Foil/Containers	0.0%	0.0%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	0.1%	0.1%
Empty Aerosol Cans	0.1%	0.2%
Other Ferrous	2.0%	1.2%
Oil filters	0.4%	0.7%
Mixed Metals/Material	2.4%	2.7%
Organics	**27.7%**	
Leaves and Grass	0.0%	0.0%
Prunings	0.0%	0.0%
Food	12.3%	17.8%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	3.2%	4.0%
Mixed Textiles	9.8%	10.7%
Disposable Diapers	0.4%	0.6%
Animal By-products	0.0%	0.0%
Rubber Products	2.0%	3.1%
Tires	0.0%	0.0%
Appliances and Electronics	**0.0%**	
Furniture	0.0%	0.0%
Mattresses	0.0%	0.0%
Small Appliances	0.0%	0.0%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.0%	0.0%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.0%	0.0%
CDL Wastes	**18.5%**	
Clean Dimension Lumber	3.4%	5.3%
Clean Engineered Wood	0.1%	0.2%
Pallets	2.0%	3.3%
Crates	0.0%	0.0%
Other Untreated Wood	0.0%	0.0%
New Painted Wood	0.3%	0.5%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.0%	0.0%
Contaminated Wood	4.0%	3.6%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	5.7%	9.1%
Carpet	0.0%	0.0%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.0%	0.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.3%	0.5%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	2.6%	4.2%
Hazardous	**0.4%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.4%	0.4%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	0.0%	0.0%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**5.5%**	
Sand/Soil/Dirt	1.1%	1.9%
Non-distinct Fines	3.6%	4.9%
Miscellaneous Organics	0.7%	0.9%
Miscellaneous Inorganics	0.0%	0.0%
Totals	**100%**	
Sample Count	7	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-35. Composition by Weight: Office
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**44.3%**	
Newspaper	1.8%	1.3%
Plain OCC/Kraft	1.7%	0.9%
Waxed OCC	0.0%	0.0%
Grocery/Shopping Bags	0.5%	0.3%
High-grade Paper	3.6%	1.9%
Mixed Low-grade Paper	7.0%	4.0%
Polycoated Containers	0.2%	0.1%
Compostable/Soiled	14.7%	4.2%
Pot. Comp. Single-use Food Service	0.6%	0.7%
Non-Comp. Single-use Food Service	6.2%	2.4%
Mixed/Other Paper	8.0%	4.0%
Plastic	**14.9%**	
#1 PET Bottles	1.8%	0.5%
#2 HDPE Natural Bottles	0.9%	0.4%
#2 HDPE Colored Bottles	0.2%	0.1%
Other Bottles	0.1%	0.1%
Tubs	0.7%	0.2%
Expanded Poly. Non-food	0.1%	0.1%
Expanded Poly. Food-grade	0.1%	0.1%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.1%	0.1%
Non-Comp. Single-use Food Service	2.3%	0.7%
Other Rigid Packaging	0.8%	0.4%
Shopping/Dry Cleaning Bags	0.1%	0.1%
Stretch Wrap	0.1%	0.1%
Clean Polyethylene Film	0.1%	0.1%
Other Film	6.0%	0.9%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	1.0%	0.7%
Plastic/Other Materials	0.5%	0.3%
Glass	**1.7%**	
Clear Bottles	0.9%	0.4%
Green Bottles	0.4%	0.4%
Brown Bottles	0.4%	0.3%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.0%	0.0%
Automotive Glass	0.0%	0.0%
Other Glass	0.0%	0.0%
Metal	**2.6%**	
Aluminum Beverage Cans	0.8%	0.4%
Aluminum Foil/Containers	0.2%	0.1%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	0.5%	0.2%
Empty Aerosol Cans	0.1%	0.1%
Other Ferrous	0.4%	0.4%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.7%	0.7%
Organics	**28.9%**	
Leaves and Grass	0.4%	0.3%
Prunings	0.0%	0.0%
Food	21.8%	4.2%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	0.2%	0.2%
Mixed Textiles	5.3%	8.0%
Disposable Diapers	1.0%	1.7%
Animal By-products	0.3%	0.5%
Rubber Products	0.0%	0.0%
Tires	0.0%	0.0%

Material	Est. Percent	+ / -
Appliances and Electronics	**0.1%**	
Furniture	0.0%	0.0%
Mattresses	0.0%	0.0%
Small Appliances	0.1%	0.1%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.0%	0.0%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.0%	0.0%
CDL Wastes	**3.1%**	
Clean Dimension Lumber	0.0%	0.1%
Clean Engineered Wood	0.0%	0.1%
Pallets	2.9%	4.5%
Crates	0.0%	0.0%
Other Untreated Wood	0.0%	0.0%
New Painted Wood	0.0%	0.0%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.1%	0.2%
Contaminated Wood	0.0%	0.0%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.0%	0.0%
Carpet	0.0%	0.0%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.0%	0.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	0.0%	0.0%
Hazardous	**4.0%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.0%	0.0%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	4.0%	6.7%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**0.4%**	
Sand/Soil/Dirt	0.1%	0.1%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	0.3%	0.4%
Miscellaneous Inorganics	0.0%	0.0%
Totals	**100%**	
Sample Count	15	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-36. Composition by Weight: Other Services
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**34.3%**	
Newspaper	0.8%	0.5%
Plain OCC/Kraft	4.4%	2.0%
Waxed OCC	1.1%	1.5%
Grocery/Shopping Bags	0.2%	0.1%
High-grade Paper	1.9%	0.8%
Mixed Low-grade Paper	4.9%	2.1%
Polycoated Containers	0.3%	0.4%
Compostable/Soiled	9.7%	3.1%
Pot. Comp. Single-use Food Service	0.2%	0.2%
Non-Comp. Single-use Food Service	4.1%	2.2%
Mixed/Other Paper	6.9%	6.8%
Plastic	**12.7%**	
#1 PET Bottles	0.7%	0.2%
#2 HDPE Natural Bottles	0.2%	0.1%
#2 HDPE Colored Bottles	0.2%	0.1%
Other Bottles	0.1%	0.1%
Tubs	0.3%	0.1%
Expanded Poly. Non-food	0.3%	0.1%
Expanded Poly. Food-grade	0.1%	0.1%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.2%	0.2%
Non-Comp. Single-use Food Service	0.6%	0.4%
Other Rigid Packaging	0.5%	0.3%
Shopping/Dry Cleaning Bags	0.1%	0.1%
Stretch Wrap	0.3%	0.4%
Clean Polyethylene Film	0.1%	0.1%
Other Film	5.3%	2.9%
Plastic Pipe	0.9%	1.2%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	1.2%	1.0%
Plastic/Other Materials	1.6%	1.1%
Glass	**5.4%**	
Clear Bottles	0.6%	0.3%
Green Bottles	1.4%	2.1%
Brown Bottles	0.2%	0.2%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	3.0%	4.5%
Automotive Glass	0.0%	0.0%
Other Glass	0.2%	0.2%
Metal	**2.9%**	
Aluminum Beverage Cans	0.5%	0.4%
Aluminum Foil/Containers	0.0%	0.0%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	0.2%	0.1%
Empty Aerosol Cans	0.1%	0.1%
Other Ferrous	1.6%	1.9%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.6%	0.5%
Organics	**24.4%**	
Leaves and Grass	1.5%	1.6%
Prunings	0.0%	0.0%
Food	18.5%	6.5%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	0.5%	0.4%
Mixed Textiles	0.6%	0.4%
Disposable Diapers	0.4%	0.6%
Animal By-products	1.8%	1.6%
Rubber Products	0.9%	0.8%
Tires	0.0%	0.0%

Material	Est. Percent	+ / -
Appliances and Electronics	**1.6%**	
Furniture	0.8%	1.3%
Mattresses	0.0%	0.0%
Small Appliances	0.6%	0.9%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.2%	0.4%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.0%	0.0%
CDL Wastes	**10.5%**	
Clean Dimension Lumber	1.7%	1.7%
Clean Engineered Wood	0.6%	0.7%
Pallets	2.1%	1.9%
Crates	0.0%	0.0%
Other Untreated Wood	0.1%	0.2%
New Painted Wood	0.0%	0.0%
Old Painted Wood	0.2%	0.3%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.0%	0.0%
Contaminated Wood	0.8%	0.9%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.0%	0.0%
Carpet	0.6%	0.7%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.0%	0.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.5%	0.8%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	3.9%	5.9%
Hazardous	**1.3%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	1.3%	2.1%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	0.0%	0.0%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**6.8%**	
Sand/Soil/Dirt	4.6%	7.6%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	0.0%	0.0%
Miscellaneous Inorganics	2.2%	3.6%
Totals	**100%**	
Sample Count	19	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-37. Composition by Weight: Restaurants
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**27.8%**	
Newspaper	0.0%	0.0%
Plain OCC/Kraft	4.0%	6.0%
Waxed OCC	0.0%	0.0%
Grocery/Shopping Bags	0.0%	0.0%
High-grade Paper	0.0%	0.0%
Mixed Low-grade Paper	2.2%	3.0%
Polycoated Containers	0.0%	0.0%
Compostable/Soiled	8.8%	9.2%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	2.5%	3.8%
Mixed/Other Paper	10.3%	16.5%
Plastic	**14.4%**	
#1 PET Bottles	0.0%	0.0%
#2 HDPE Natural Bottles	0.2%	0.3%
#2 HDPE Colored Bottles	0.1%	0.2%
Other Bottles	0.0%	0.0%
Tubs	3.0%	4.4%
Expanded Poly. Non-food	0.0%	0.0%
Expanded Poly. Food-grade	0.3%	0.4%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.9%	0.8%
Other Rigid Packaging	5.3%	8.5%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.0%	0.0%
Clean Polyethylene Film	0.0%	0.1%
Other Film	3.4%	3.1%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	1.1%	1.9%
Plastic/Other Materials	0.0%	0.0%
Glass	**0.5%**	
Clear Bottles	0.0%	0.0%
Green Bottles	0.0%	0.0%
Brown Bottles	0.5%	0.7%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.0%	0.0%
Automotive Glass	0.0%	0.0%
Other Glass	0.0%	0.0%
Metal	**2.0%**	
Aluminum Beverage Cans	0.6%	0.8%
Aluminum Foil/Containers	0.1%	0.2%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	1.0%	0.8%
Empty Aerosol Cans	0.3%	0.5%
Other Ferrous	0.0%	0.0%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.0%	0.0%
Organics	**53.8%**	
Leaves and Grass	0.0%	0.0%
Prunings	0.0%	0.0%
Food	53.4%	18.7%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	0.0%	0.0%
Mixed Textiles	0.0%	0.0%
Disposable Diapers	0.0%	0.0%
Animal By-products	0.0%	0.0%
Rubber Products	0.4%	0.3%
Tires	0.0%	0.0%

Material	Est. Percent	+ / -
Appliances and Electronics	**0.0%**	
Furniture	0.0%	0.0%
Mattresses	0.0%	0.0%
Small Appliances	0.0%	0.0%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.0%	0.0%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.0%	0.0%
CDL Wastes	**1.5%**	
Clean Dimension Lumber	0.0%	0.0%
Clean Engineered Wood	0.0%	0.0%
Pallets	0.0%	0.0%
Crates	0.0%	0.0%
Other Untreated Wood	0.0%	0.0%
New Painted Wood	0.0%	0.0%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.0%	0.0%
Contaminated Wood	1.5%	2.3%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.0%	0.0%
Carpet	0.0%	0.0%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.0%	0.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	0.0%	0.0%
Hazardous	**0.0%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.0%	0.0%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	0.0%	0.0%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**0.0%**	
Sand/Soil/Dirt	0.0%	0.0%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	0.0%	0.0%
Miscellaneous Inorganics	0.0%	0.0%
Totals	**100%**	
Sample Count	3	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-38. Composition by Weight: Retail
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**25.1%**	
Newspaper	2.0%	0.9%
Plain OCC/Kraft	4.8%	1.4%
Waxed OCC	1.3%	1.1%
Grocery/Shopping Bags	0.1%	0.1%
High-grade Paper	1.9%	1.0%
Mixed Low-grade Paper	4.7%	1.2%
Polycoated Containers	0.1%	0.0%
Compostable/Soiled	4.2%	1.2%
Pot. Comp. Single-use Food Service	0.1%	0.2%
Non-Comp. Single-use Food Service	1.5%	0.8%
Mixed/Other Paper	4.3%	2.2%
Plastic	**15.4%**	
#1 PET Bottles	0.5%	0.1%
#2 HDPE Natural Bottles	0.4%	0.2%
#2 HDPE Colored Bottles	0.4%	0.3%
Other Bottles	0.0%	0.0%
Tubs	0.7%	0.3%
Expanded Poly. Non-food	0.3%	0.1%
Expanded Poly. Food-grade	0.2%	0.2%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.6%	0.2%
Other Rigid Packaging	0.6%	0.3%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.6%	0.4%
Clean Polyethylene Film	0.4%	0.3%
Other Film	5.7%	1.2%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	2.6%	1.6%
Plastic/Other Materials	2.4%	1.3%
Glass	**1.1%**	
Clear Bottles	0.3%	0.2%
Green Bottles	0.2%	0.1%
Brown Bottles	0.3%	0.2%
Container Glass	0.0%	0.1%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.0%	0.0%
Automotive Glass	0.0%	0.0%
Other Glass	0.3%	0.3%
Metal	**5.3%**	
Aluminum Beverage Cans	0.3%	0.1%
Aluminum Foil/Containers	0.1%	0.1%
Other Aluminum	0.1%	0.1%
Other Nonferrous	0.1%	0.2%
Steel Food Cans	0.5%	0.3%
Empty Aerosol Cans	0.0%	0.0%
Other Ferrous	3.6%	2.3%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.8%	0.7%
Organics	**38.7%**	
Leaves and Grass	1.3%	1.7%
Prunings	0.0%	0.0%
Food	30.5%	6.0%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	2.6%	2.4%
Mixed Textiles	2.2%	1.6%
Disposable Diapers	0.3%	0.4%
Animal By-products	0.4%	0.5%
Rubber Products	1.5%	1.7%
Tires	0.0%	0.0%

Material	Est. Percent	+ / -
Appliances and Electronics	**1.1%**	
Furniture	0.8%	0.9%
Mattresses	0.1%	0.2%
Small Appliances	0.2%	0.3%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.0%	0.0%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.0%	0.0%
CDL Wastes	**11.3%**	
Clean Dimension Lumber	0.6%	0.4%
Clean Engineered Wood	2.0%	2.0%
Pallets	0.8%	1.0%
Crates	0.5%	0.4%
Other Untreated Wood	0.1%	0.2%
New Painted Wood	0.6%	0.8%
Old Painted Wood	1.0%	1.1%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.3%	0.3%
Contaminated Wood	3.3%	3.4%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.7%	0.8%
Carpet	0.1%	0.1%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.6%	0.9%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	0.5%	0.8%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.2%	0.2%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	0.0%	0.0%
Hazardous	**1.1%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.1%	0.1%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	1.0%	1.7%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**0.8%**	
Sand/Soil/Dirt	0.1%	0.2%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	0.2%	0.4%
Miscellaneous Inorganics	0.5%	0.5%
Totals	**100%**	
Sample Count	38	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-39. Composition by Weight: Transportation
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**28.7%**	
Newspaper	2.0%	1.6%
Plain OCC/Kraft	7.3%	2.1%
Waxed OCC	0.0%	0.0%
Grocery/Shopping Bags	0.3%	0.3%
High-grade Paper	1.9%	1.6%
Mixed Low-grade Paper	5.3%	1.7%
Polycoated Containers	0.0%	0.0%
Compostable/Soiled	6.4%	3.3%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	2.7%	1.6%
Mixed/Other Paper	3.0%	3.0%
Plastic	**10.2%**	
#1 PET Bottles	1.1%	0.8%
#2 HDPE Natural Bottles	0.0%	0.1%
#2 HDPE Colored Bottles	0.1%	0.1%
Other Bottles	0.0%	0.0%
Tubs	0.3%	0.2%
Expanded Poly. Non-food	1.4%	2.2%
Expanded Poly. Food-grade	0.2%	0.2%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.7%	0.6%
Other Rigid Packaging	0.3%	0.2%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.4%	0.6%
Clean Polyethylene Film	0.1%	0.1%
Other Film	4.2%	1.8%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	0.4%	0.4%
Plastic/Other Materials	0.9%	0.9%
Glass	**2.1%**	
Clear Bottles	0.4%	0.4%
Green Bottles	0.5%	0.8%
Brown Bottles	1.2%	1.4%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.0%	0.0%
Automotive Glass	0.0%	0.0%
Other Glass	0.0%	0.0%
Metal	**5.4%**	
Aluminum Beverage Cans	0.5%	0.5%
Aluminum Foil/Containers	0.0%	0.0%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	0.0%	0.1%
Empty Aerosol Cans	0.1%	0.1%
Other Ferrous	1.9%	1.3%
Oil filters	0.0%	0.0%
Mixed Metals/Material	2.9%	2.8%
Organics	**25.2%**	
Leaves and Grass	0.3%	0.4%
Prunings	0.0%	0.0%
Food	11.7%	7.2%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	1.9%	1.3%
Mixed Textiles	0.7%	1.1%
Disposable Diapers	0.5%	0.8%
Animal By-products	1.5%	2.6%
Rubber Products	8.5%	6.9%
Tires	0.0%	0.0%

Material	Est. Percent	+ / -
Appliances and Electronics	**0.5%**	
Furniture	0.0%	0.0%
Mattresses	0.0%	0.0%
Small Appliances	0.0%	0.0%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.0%	0.0%
CRT Monitors	0.5%	0.9%
CRT Televisions	0.0%	0.0%
Other Electronics	0.0%	0.0%
CDL Wastes	**23.5%**	
Clean Dimension Lumber	5.0%	7.3%
Clean Engineered Wood	1.8%	2.1%
Pallets	11.7%	10.2%
Crates	0.1%	0.2%
Other Untreated Wood	0.0%	0.0%
New Painted Wood	0.0%	0.1%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.0%	0.0%
Contaminated Wood	2.5%	4.1%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.0%	0.0%
Carpet	0.0%	0.0%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.0%	0.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	1.6%	2.6%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	0.7%	1.1%
Hazardous	**1.2%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.9%	1.5%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.3%	0.4%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	0.0%	0.0%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**3.3%**	
Sand/Soil/Dirt	0.5%	0.9%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	2.8%	3.6%
Miscellaneous Inorganics	0.0%	0.0%
Totals	**100%**	
Sample Count	8	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-40. Composition by Weight: Wholesale
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**23.3%**	
Newspaper	0.1%	0.1%
Plain OCC/Kraft	3.2%	2.3%
Waxed OCC	3.0%	5.0%
Grocery/Shopping Bags	0.0%	0.0%
High-grade Paper	0.6%	0.9%
Mixed Low-grade Paper	1.8%	2.3%
Polycoated Containers	0.0%	0.0%
Compostable/Soiled	4.3%	5.3%
Pot. Comp. Single-use Food Service	0.7%	1.2%
Non-Comp. Single-use Food Service	2.0%	2.8%
Mixed/Other Paper	7.7%	9.1%
Plastic	**17.5%**	
#1 PET Bottles	0.2%	0.2%
#2 HDPE Natural Bottles	0.0%	0.0%
#2 HDPE Colored Bottles	0.0%	0.0%
Other Bottles	0.0%	0.0%
Tubs	0.2%	0.2%
Expanded Poly. Non-food	0.4%	0.6%
Expanded Poly. Food-grade	0.0%	0.0%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	1.0%	1.0%
Other Rigid Packaging	0.4%	0.4%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.0%	0.0%
Clean Polyethylene Film	0.0%	0.0%
Other Film	14.7%	10.5%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	0.3%	0.4%
Plastic/Other Materials	0.2%	0.3%
Glass	**0.3%**	
Clear Bottles	0.3%	0.3%
Green Bottles	0.0%	0.0%
Brown Bottles	0.0%	0.1%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.0%	0.0%
Automotive Glass	0.0%	0.0%
Other Glass	0.0%	0.0%
Metal	**0.5%**	
Aluminum Beverage Cans	0.1%	0.1%
Aluminum Foil/Containers	0.1%	0.2%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.0%	0.0%
Steel Food Cans	0.2%	0.3%
Empty Aerosol Cans	0.1%	0.1%
Other Ferrous	0.1%	0.1%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.0%	0.0%
Organics	**57.3%**	
Leaves and Grass	0.0%	0.0%
Prunings	0.0%	0.0%
Food	55.4%	25.6%
Fats, Oils, Grease	0.8%	1.4%
Textiles/Clothing	0.0%	0.0%
Mixed Textiles	1.0%	1.5%
Disposable Diapers	0.0%	0.0%
Animal By-products	0.0%	0.0%
Rubber Products	0.1%	0.2%
Tires	0.0%	0.0%

+ / -	Est. Percent	+ / -
Appliances and Electronics	**0.0%**	
Furniture	0.0%	0.0%
Mattresses	0.0%	0.0%
Small Appliances	0.0%	0.0%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.0%	0.0%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.0%	0.0%
CDL Wastes	**0.3%**	
Clean Dimension Lumber	0.0%	0.0%
Clean Engineered Wood	0.0%	0.0%
Pallets	0.2%	0.3%
Crates	0.0%	0.0%
Other Untreated Wood	0.0%	0.0%
New Painted Wood	0.1%	0.1%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	0.0%	0.0%
Contaminated Wood	0.0%	0.0%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.0%	0.0%
Carpet	0.0%	0.0%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.0%	0.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.0%	0.0%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.0%	0.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	0.0%	0.0%
Hazardous	**0.0%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.0%	0.0%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	0.0%	0.0%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**0.7%**	
Sand/Soil/Dirt	0.0%	0.0%
Non-distinct Fines	0.7%	1.1%
Miscellaneous Organics	0.0%	0.0%
Miscellaneous Inorganics	0.0%	0.0%
Totals	**100%**	
Sample Count	6	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 5-41. Composition by Weight: Mixed Commercial Generators
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**23.7%**	
Newspaper	1.3%	0.3%
Plain OCC/Kraft	2.2%	0.4%
Waxed OCC	0.6%	0.4%
Grocery/Shopping Bags	0.5%	0.2%
High-grade Paper	1.6%	0.4%
Mixed Low-grade Paper	4.6%	0.7%
Polycoated Containers	0.1%	0.1%
Compostable/Soiled	7.6%	1.1%
Pot. Comp. Single-use Food Service	0.2%	0.1%
Non-Comp. Single-use Food Service	1.4%	0.3%
Mixed/Other Paper	3.6%	0.7%
Plastic	**11.4%**	
#1 PET Bottles	0.6%	0.1%
#2 HDPE Natural Bottles	0.3%	0.1%
#2 HDPE Colored Bottles	0.2%	0.1%
Other Bottles	0.0%	0.0%
Tubs	0.6%	0.1%
Expanded Poly. Non-food	0.2%	0.1%
Expanded Poly. Food-grade	0.1%	0.0%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.6%	0.1%
Other Rigid Packaging	0.5%	0.1%
Shopping/Dry Cleaning Bags	0.1%	0.0%
Stretch Wrap	0.4%	0.2%
Clean Polyethylene Film	0.2%	0.1%
Other Film	5.5%	0.6%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.0%	0.0%
Durable Plastic Products	0.7%	0.2%
Plastic/Other Materials	1.2%	0.4%
Glass	**2.3%**	
Clear Bottles	0.7%	0.2%
Green Bottles	0.4%	0.1%
Brown Bottles	0.5%	0.1%
Container Glass	0.1%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.1%	0.1%
Automotive Glass	0.0%	0.0%
Other Glass	0.6%	0.4%
Metal	**2.8%**	
Aluminum Beverage Cans	0.4%	0.1%
Aluminum Foil/Containers	0.2%	0.1%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.1%	0.1%
Steel Food Cans	0.5%	0.1%
Empty Aerosol Cans	0.1%	0.0%
Other Ferrous	0.9%	0.3%
Oil filters	0.0%	0.0%
Mixed Metals/Material	0.6%	0.2%
Organics	**45.9%**	
Leaves and Grass	1.8%	0.9%
Prunings	0.0%	0.1%
Food	35.8%	3.3%
Fats, Oils, Grease	0.1%	0.1%
Textiles/Clothing	1.9%	0.6%
Mixed Textiles	1.1%	0.4%
Disposable Diapers	2.6%	0.9%
Animal By-products	1.7%	0.7%
Rubber Products	0.6%	0.3%
Tires	0.2%	0.4%

Material	Est. Percent	+ / -
Appliances and Electronics	**1.2%**	
Furniture	0.4%	0.3%
Mattresses	0.1%	0.1%
Small Appliances	0.1%	0.1%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.1%	0.1%
CRT Monitors	0.1%	0.1%
CRT Televisions	0.1%	0.2%
Other Electronics	0.3%	0.3%
CDL Wastes	**10.7%**	
Clean Dimension Lumber	1.0%	0.6%
Clean Engineered Wood	0.8%	0.4%
Pallets	1.1%	0.8%
Crates	0.5%	0.7%
Other Untreated Wood	0.0%	0.1%
New Painted Wood	0.7%	0.4%
Old Painted Wood	0.1%	0.1%
Creosote-treated Wood	0.3%	0.4%
Other Treated Wood	0.4%	0.3%
Contaminated Wood	0.6%	0.3%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	0.5%	0.4%
Carpet	0.6%	0.4%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.0%	0.0%
Concrete	0.9%	1.0%
Asphalt Paving	0.0%	0.0%
Other Aggregates	1.2%	1.1%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.5%	0.8%
Cement Fiber Board	0.1%	0.2%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	1.3%	1.2%
Hazardous	**0.7%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.0%	0.1%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.1%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	0.6%	0.4%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**1.3%**	
Sand/Soil/Dirt	0.3%	0.3%
Non-distinct Fines	0.1%	0.1%
Miscellaneous Organics	0.5%	0.3%
Miscellaneous Inorganics	0.4%	0.4%
Totals	**100%**	
Sample Count	128	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

6 Self-haul Composition Results, by Subpopulation

A total of 226 self-haul loads were sampled from January to December 2012. Descriptive data about samples from each subpopulation are summarized in Table 6-1. As shown, many of the analyses are based on a very small number of samples. Consequently, these calculations are subject to a relatively wide margin of error. The sampling plan was designed to provide statistically robust results for the overall self-haul substream. The composition results by subpopulation are provided as rough estimates only.

Table 6-1. Description of Samples for each Self-haul Subpopulation
(January – December 2012)

			(All weights in pounds)	
Subpopulation	**Sample Count**	**Total Sample Weight**	**Average Sample Weight**	**Average Load Net Weight**
Transfer Station				
NRDS	117	28,373.0	242.5	469.1
SRDS	109	28,961.7	265.7	521.5
Vehicle Type				
Passenger Vehicle	21	4,901.3	233.4	310.0
Truck	205	52,433.4	255.8	513.3
Season				
Spring	37	9,667.0	261.3	657.5
Summer	75	18,434.4	245.8	459.4
Autumn	37	9,510.7	257.0	345.5
Winter	77	19,722.6	256.1	521.6
Generator Type, by Site*				
Residential, NRDS	77	19,225.7	249.7	406.8
Residential, SRDS	84	22,563.5	268.6	433.4
Non-Residential, NRDS	38	8,722.0	229.5	589.7
Non-Residential, SRDS	24	6,060.6	252.5	837.4
Overall	**226**	**57,334.7**	**253.7**	**494.4**

Seattle Public Utilities provided total disposal quantities (in tons) for the study period for the following waste populations: 1) total self-haul, 2) self-haul by vehicle type, 3) self-haul by season, and 4) self-haul by transfer station.

Table 6-2 illustrates the split between self-haul wastes generated by residential and non-residential generators[11]. The vehicle net weights and trip counts collected during 2012 sampling days were applied to the annual self-haul tonnage and trips.[12] As shown in the table, approximately 62% of 2012 self-haul waste was residential, while the remaining 38% was from

[11] The self-haul substream is waste that is: a) generated at residences as well as businesses and institutions; and, b) hauled by the household or business that generated the waste. Self haul residential and non-residential are defined by the hauling entity: self-haul non-residential is hauled by a commercial enterprise (like a landscaper or contractor), and self-haul residential is hauled by a resident from his or her home.

[12] Data and statistics on daily incoming trips and tons at the City of Seattle's North and South Recycling & Disposal Stations can be found on the web at http://www.seattle.gov/util/Documents/Reports/SolidWasteReports/index.htm

non-residential sources. About 58% of self-haul trips and 55% of self-haul tons were delivered by residential self-haul trucks in 2012. Non-residential self-haul trucks accounted for approximately 25% of self-haul trips and about 36% of tons.

Table 6-2. Self-haul Waste Tons and Trips, by Residential and Non-residential Generators (January – December 2012)

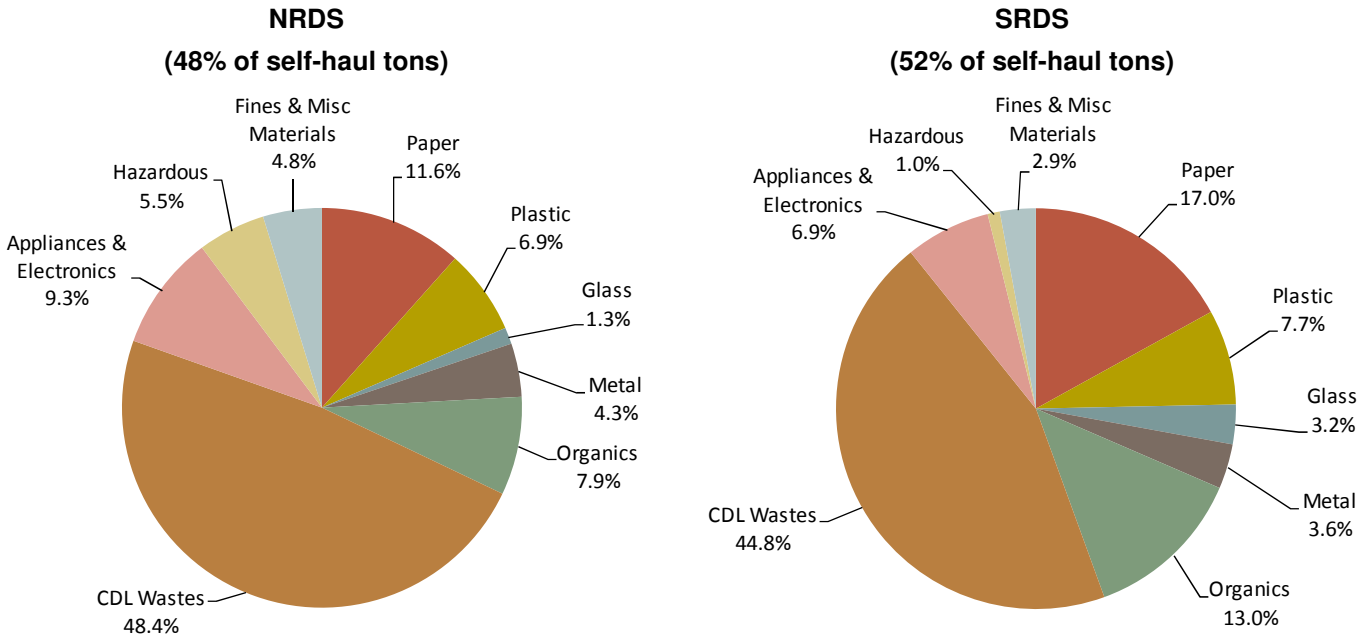
	Tons		Trips	
Subpopulation	Count	Percent	Count	Percent
Residential				
Passenger Vehicles	4,952	7.0%	23,652	15.6%
Self-haul Trucks	38,738	55.0%	88,384	58.2%
Residential Subtotal	*43,690*	*62.0%*	*112,036*	*73.8%*
Non-residential				
Passenger Vehicles	1,332	1.9%	2,490	1.6%
Self-haul Trucks	25,452	36.1%	37,345	24.6%
Non-residential Subtotal	*26,784*	*38.0%*	*39,835*	*26.2%*
Total	**70,474**	**100.0%**	**151,871**	**100.0%**

In the following sections, self-haul waste composition results are presented by transfer station, vehicle type, season, and generator type, by site. Results are depicted in three ways: a pie chart reflects composition by the nine broad material categories; next, a table lists the top ten components, by weight; and finally, the full composition results are presented in a detailed table. Following the top ten tables in Sections 6.1, 6.2, and 6.3, the composition results from the subpopulations presented in those sections are compared.

6.1 Self-haul Composition by Transfer Station

This section examines the composition of wastes self-hauled to the North and South Recycling and Disposal Stations (NRDS and SRDS). Figure 6-1 summarizes the results on a broad material category level. **CDL wastes** composed the largest material category of the waste hauled to both of the transfer stations, followed by **paper**. **CDL wastes** include components such as *clean dimensional lumber*, *other treated wood*, and *other aggregates.* **Paper** includes *plain OCC/Kraft*, *mixed low-grade paper*, and *mixed/other paper*. The following sections examine self-hauled waste from each transfer station in more detail.

Figure 6-1. Self-haul Composition Summary: by Transfer Station
(January – December 2012)



6.1.1 North Recycling and Disposal Station (NRDS)

A total of 117 samples were taken from loads that were delivered to the NRDS during the year 2012. Self-haul vehicles delivered 33,731 tons of waste to the NRDS during the 2012 calendar year. The composition estimates for this subpopulation were applied to the 33,731 tons to estimate the amount of waste disposed for each component category. The top ten components listed in Table 6-3 made up almost 50% of the total materials from NRDS loads; *furniture*, *clean dimensional lumber*, and *demo gypsum scrap* each composed more than 5% of the total tonnage. Please see Table 6-5 for a detailed listing of the full composition results for waste sampled at the NRDS.

Table 6-3. Top Ten Components: North Recycling and Disposal Station
(January – December 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Furniture	7.5%	7.5%	2,540
Clean Dimension Lumber	6.8%	14.3%	2,293
Demo Gypsum Scrap	6.2%	20.5%	2,081
Medical Wastes	4.9%	25.4%	1,660
Concrete	4.5%	30.0%	1,531
Other Construction	4.3%	34.2%	1,439
Sand/Soil/Dirt	4.2%	38.5%	1,426
New Painted Wood	4.0%	42.4%	1,340
Contaminated Wood	3.5%	45.9%	1,188
Carpet	3.3%	49.3%	1,123
Total	**49.3%**		**16,621**

6.1.2 South Recycling and Disposal Station (SRDS)

A total of 109 samples from the SRDS were examined during this study period. In 2012, 36,743 tons of self-haul waste was disposed at the SRDS. The composition estimates for this subpopulation were applied to the 36,743 tons to estimate the amount of waste disposed for each component category. As shown in Table 6-4, *food*, *mixed/other paper*, *clean dimensional lumber*, and *furniture* each accounted for greater than 5%, by weight, of the self-haul waste disposed at the SRDS. The top ten components accounted for almost 50% of the total, by weight. Please see Table 6-6 for a full list of the composition results for the SRDS.

Table 6-4. Top Ten Components: South Recycling and Disposal Station
(January – December 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Food	7.2%	7.2%	2,652
Mixed/Other Paper	5.6%	12.8%	2,069
Clean Dimension Lumber	5.4%	18.3%	1,990
Furniture	5.2%	23.5%	1,911
Demo Gypsum Scrap	4.9%	28.4%	1,809
Contaminated Wood	4.3%	32.7%	1,578
Other Construction	4.3%	37.0%	1,569
New Painted Wood	4.2%	41.1%	1,540
Clean Engineered Wood	4.1%	45.2%	1,508
Mixed Low-grade Paper	3.6%	48.8%	1,318
Total	**48.8%**		**17,943**

6.1.3 Comparisons between Transfer Stations

Several of the top ten components for both the NRDS and the SRDS were types of **CDL wastes**, including *clean dimensional lumber*, *demo gypsum scrap, contaminated wood*, *new painted wood*, and *other construction debris*. Another top ten component shared between the self-haul waste streams at the two transfer stations was *furniture*.

On the other hand, *medical wastes, sand/soil/dirt*, and *carpet* were among the top ten components of the NRDS waste, but not among the top ten components of the SRDS waste. *Food* and *mixed/other paper* were top ten components of the SRDS waste stream, but not of the NRDS.

Table 6-5. Composition by Weight: Self-haul at the NRDS
(January – December 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**11.6%**		**3,908**
Newspaper	0.4%	0.3%	127
Plain OCC/Kraft	1.5%	1.0%	500
Waxed OCC	0.0%	0.0%	0
Grocery/Shopping Bags	0.0%	0.0%	10
High-grade Paper	0.8%	1.0%	274
Mixed Low-grade Paper	3.2%	2.1%	1,069
Polycoated Containers	0.2%	0.2%	69
Compostable/Soiled	2.5%	1.5%	845
Pot. Comp. Single-use Food Service	0.4%	0.5%	141
Non-Comp. Single-use Food Service	1.1%	0.8%	381
Mixed/Other Paper	1.5%	0.7%	491
Plastic	**6.9%**		**2,327**
#1 PET Bottles	0.3%	0.2%	100
#2 HDPE Natural Bottles	0.2%	0.1%	71
#2 HDPE Colored Bottles	0.0%	0.0%	14
Other Bottles	0.0%	0.0%	1
Tubs	0.5%	0.2%	165
Expanded Poly. Non-food	0.0%	0.0%	11
Expanded Poly. Food-grade	0.0%	0.0%	10
Rigid Poly. Foam Insulation	0.0%	0.0%	15
Pot. Comp. Single-use Food Service	0.0%	0.0%	3
Non-Comp. Single-use Food Service	0.3%	0.2%	106
Other Rigid Packaging	0.3%	0.2%	103
Shopping/Dry Cleaning Bags	0.0%	0.0%	3
Stretch Wrap	0.1%	0.1%	26
Clean Polyethylene Film	0.0%	0.0%	4
Other Film	1.6%	0.7%	553
Plastic Pipe	0.0%	0.0%	2
Foam Carpet Padding	0.3%	0.3%	93
Durable Plastic Products	1.8%	0.8%	614
Plastic/Other Materials	1.3%	0.5%	431
Glass	**1.3%**		**447**
Clear Bottles	0.1%	0.1%	45
Green Bottles	0.1%	0.1%	33
Brown Bottles	0.0%	0.0%	12
Container Glass	0.0%	0.0%	0
Fluorescent Tubes	0.0%	0.0%	1
CFLs	0.0%	0.0%	2
Flat Glass	0.2%	0.4%	84
Automotive Glass	0.0%	0.0%	0
Other Glass	0.8%	0.6%	270
Metal	**4.3%**		**1,458**
Aluminum Beverage Cans	0.0%	0.0%	12
Aluminum Foil/Containers	0.0%	0.0%	5
Other Aluminum	0.0%	0.0%	7
Other Nonferrous	0.4%	0.2%	145
Steel Food Cans	0.0%	0.0%	11
Empty Aerosol Cans	0.0%	0.0%	3
Other Ferrous	1.8%	0.7%	624
Oil filters	0.0%	0.0%	1
Mixed Metals/Material	1.9%	0.7%	651
Organics	**7.9%**		**2,678**
Leaves and Grass	1.3%	1.2%	449
Prunings	0.1%	0.1%	32
Food	2.4%	0.8%	808
Fats, Oils, Grease	0.1%	0.0%	46
Textiles/Clothing	1.0%	0.7%	348
Mixed Textiles	1.5%	1.3%	510
Disposable Diapers	0.1%	0.1%	19
Animal By-products	0.4%	0.3%	148
Rubber Products	0.9%	0.9%	295
Tires	0.1%	0.1%	22

Material	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**9.3%**		**3,147**
Furniture	7.5%	2.4%	2,540
Mattresses	0.9%	0.7%	315
Small Appliances	0.3%	0.2%	116
Cell Phones	0.0%	0.0%	7
Audio/Visual Equipment	0.2%	0.1%	57
CRT Monitors	0.0%	0.0%	0
CRT Televisions	0.0%	0.0%	2
Other Electronics	0.3%	0.2%	111
CDL Wastes	**48.4%**		**16,314**
Clean Dimension Lumber	6.8%	2.2%	2,293
Clean Engineered Wood	2.5%	0.9%	853
Pallets	1.2%	1.1%	389
Crates	0.1%	0.1%	50
Other Untreated Wood	0.9%	0.9%	304
New Painted Wood	4.0%	1.5%	1,340
Old Painted Wood	2.1%	1.3%	724
Creosote-treated Wood	0.2%	0.3%	70
Other Treated Wood	3.3%	1.9%	1,122
Contaminated Wood	3.5%	1.5%	1,188
New Gypsum Scrap	0.1%	0.1%	22
Demo Gypsum Scrap	6.2%	3.6%	2,081
Carpet	3.3%	1.4%	1,123
Felt Carpet Pad	0.3%	0.3%	107
Fiberglass Insulation	0.4%	0.5%	136
Concrete	4.5%	2.5%	1,531
Asphalt Paving	0.1%	0.0%	43
Other Aggregates	2.4%	1.0%	813
Rock	0.1%	0.1%	28
Asphalt Shingles	0.1%	0.1%	20
Other Asphaltic Roofing	0.2%	0.2%	74
Ceramics	1.7%	1.3%	558
Cement Fiber Board	0.0%	0.0%	0
Single-ply Roofing Membranes	0.0%	0.0%	6
Ceiling Tiles	0.0%	0.0%	1
Other Construction	4.3%	1.6%	1,439
Hazardous	**5.5%**		**1,849**
Dried Latex Paint	0.1%	0.1%	20
Liquid Latex Paint	0.0%	0.0%	1
Solvent-based Adhesives	0.1%	0.1%	25
Water-based Adhesives	0.0%	0.0%	0
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	2
Pesticides/Herbicides	0.0%	0.0%	3
Rechargeable Batteries	0.0%	0.0%	11
Other Dry-cell Batteries	0.0%	0.0%	4
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil/Diesel Oil	0.1%	0.0%	32
Asbestos	0.0%	0.0%	0
Explosives	0.0%	0.0%	7
Medical Wastes	4.9%	5.2%	1,660
Other Cleaners/Chemicals	0.2%	0.3%	68
Other Potentially Harmful Waste	0.0%	0.1%	16
Fines and Misc Materials	**4.8%**		**1,603**
Sand/Soil/Dirt	4.2%	1.1%	1,426
Non-distinct Fines	0.1%	0.0%	23
Miscellaneous Organics	0.3%	0.3%	97
Miscellaneous Inorganics	0.2%	0.2%	56
Totals	**100%**		**33,731**
Sample Count	117		

Table 6-6. Composition by Weight: Self-haul at the SRDS
(January – December 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**17.0%**		**6,239**
Newspaper	1.0%	0.1%	367
Plain OCC/Kraft	1.5%	0.6%	537
Waxed OCC	0.4%	0.5%	142
Grocery/Shopping Bags	0.1%	0.0%	34
High-grade Paper	1.7%	0.2%	631
Mixed Low-grade Paper	3.6%	0.5%	1,318
Polycoated Containers	0.2%	0.1%	73
Compostable/Soiled	1.2%	0.4%	449
Pot. Comp. Single-use Food Service	0.7%	0.0%	264
Non-Comp. Single-use Food Service	1.0%	0.1%	355
Mixed/Other Paper	5.6%	0.2%	2,069
Plastic	**7.7%**		**2,828**
#1 PET Bottles	0.3%	0.1%	126
#2 HDPE Natural Bottles	0.0%	0.0%	14
#2 HDPE Colored Bottles	0.2%	0.0%	71
Other Bottles	0.1%	0.0%	21
Tubs	0.4%	0.2%	138
Expanded Poly. Non-food	0.1%	0.1%	39
Expanded Poly. Food-grade	0.0%	0.0%	4
Rigid Poly. Foam Insulation	0.0%	0.0%	6
Pot. Comp. Single-use Food Service	0.0%	0.0%	0
Non-Comp. Single-use Food Service	0.2%	0.1%	76
Other Rigid Packaging	0.1%	0.0%	40
Shopping/Dry Cleaning Bags	0.0%	0.0%	7
Stretch Wrap	0.0%	0.0%	6
Clean Polyethylene Film	0.0%	0.0%	4
Other Film	1.9%	0.4%	705
Plastic Pipe	0.1%	0.1%	22
Foam Carpet Padding	0.8%	0.8%	308
Durable Plastic Products	2.3%	1.1%	832
Plastic/Other Materials	1.1%	0.4%	408
Glass	**3.2%**		**1,173**
Clear Bottles	0.6%	0.8%	218
Green Bottles	0.0%	0.0%	4
Brown Bottles	0.9%	1.4%	315
Container Glass	0.0%	0.0%	0
Fluorescent Tubes	0.0%	0.0%	2
CFLs	0.0%	0.0%	2
Flat Glass	1.1%	0.3%	413
Automotive Glass	0.0%	0.0%	0
Other Glass	0.6%	0.5%	218
Metal	**3.6%**		**1,323**
Aluminum Beverage Cans	0.2%	0.0%	60
Aluminum Foil/Containers	0.1%	0.0%	28
Other Aluminum	0.1%	0.1%	44
Other Nonferrous	0.1%	0.1%	43
Steel Food Cans	0.0%	0.0%	15
Empty Aerosol Cans	0.1%	0.1%	19
Other Ferrous	1.0%	0.4%	377
Oil filters	0.0%	0.0%	2
Mixed Metals/Material	2.0%	0.8%	735
Organics	**13.0%**		**4,767**
Leaves and Grass	3.0%	1.6%	1,109
Prunings	0.0%	0.0%	11
Food	7.2%	0.8%	2,652
Fats, Oils, Grease	0.1%	0.0%	25
Textiles/Clothing	0.6%	0.3%	203
Mixed Textiles	1.0%	0.2%	375
Disposable Diapers	0.1%	0.0%	36
Animal By-products	0.1%	0.1%	48
Rubber Products	0.4%	0.4%	156
Tires	0.4%	0.5%	151

Material	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**6.9%**		**2,529**
Furniture	5.2%	2.2%	1,911
Mattresses	0.8%	0.4%	279
Small Appliances	0.3%	0.2%	115
Cell Phones	0.0%	0.0%	2
Audio/Visual Equipment	0.2%	0.1%	91
CRT Monitors	0.1%	0.1%	19
CRT Televisions	0.1%	0.0%	24
Other Electronics	0.2%	0.1%	87
CDL Wastes	**44.8%**		**16,456**
Clean Dimension Lumber	5.4%	2.0%	1,990
Clean Engineered Wood	4.1%	2.5%	1,508
Pallets	1.7%	1.9%	627
Crates	0.1%	0.1%	38
Other Untreated Wood	0.2%	0.2%	79
New Painted Wood	4.2%	1.6%	1,540
Old Painted Wood	2.8%	2.1%	1,034
Creosote-treated Wood	0.2%	0.1%	69
Other Treated Wood	2.9%	1.5%	1,079
Contaminated Wood	4.3%	1.5%	1,578
New Gypsum Scrap	0.9%	1.1%	346
Demo Gypsum Scrap	4.9%	3.1%	1,809
Carpet	3.1%	1.2%	1,131
Felt Carpet Pad	0.2%	0.2%	68
Fiberglass Insulation	0.3%	0.2%	103
Concrete	2.3%	1.4%	834
Asphalt Paving	0.0%	0.0%	0
Other Aggregates	1.3%	1.1%	481
Rock	0.0%	0.0%	12
Asphalt Shingles	0.7%	1.0%	266
Other Asphaltic Roofing	0.1%	0.2%	36
Ceramics	0.2%	0.2%	91
Cement Fiber Board	0.2%	0.2%	68
Single-ply Roofing Membranes	0.2%	0.3%	91
Ceiling Tiles	0.0%	0.1%	12
Other Construction	4.3%	1.7%	1,569
Hazardous	**1.0%**		**358**
Dried Latex Paint	0.0%	0.0%	12
Liquid Latex Paint	0.2%	0.1%	60
Solvent-based Adhesives	0.0%	0.0%	7
Water-based Adhesives	0.1%	0.2%	50
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.1%	12
Pesticides/Herbicides	0.1%	0.2%	54
Rechargeable Batteries	0.0%	0.0%	0
Other Dry-cell Batteries	0.0%	0.0%	2
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	3
Motor Oil/Diesel Oil	0.1%	0.0%	48
Asbestos	0.1%	0.0%	26
Explosives	0.0%	0.0%	0
Medical Wastes	0.0%	0.0%	0
Other Cleaners/Chemicals	0.2%	0.3%	84
Other Potentially Harmful Waste	0.0%	0.0%	0
Fines and Misc Materials	**2.9%**		**1,069**
Sand/Soil/Dirt	2.3%	1.7%	836
Non-distinct Fines	0.0%	0.1%	16
Miscellaneous Organics	0.5%	0.6%	198
Miscellaneous Inorganics	0.1%	0.0%	19
Totals	**100%**		**36,743**
Sample Count	109		

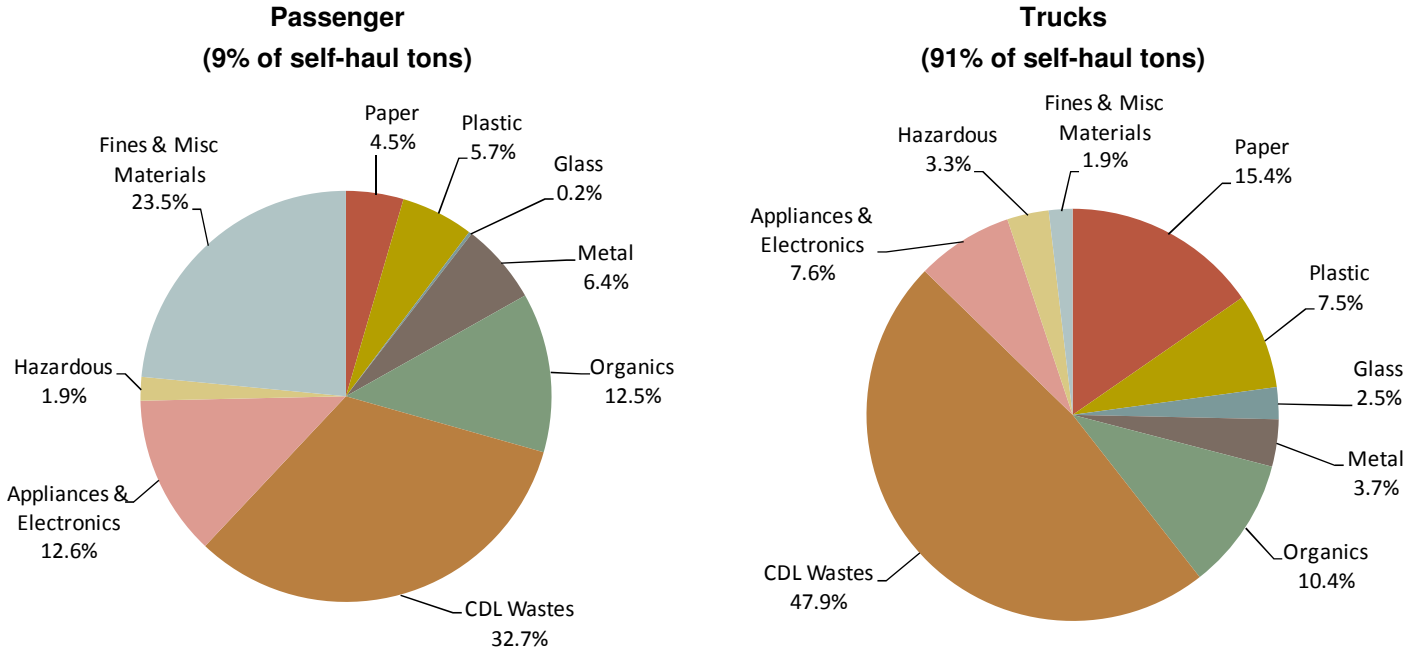
Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

6.2 Self-haul Composition by Vehicle Type

Wastes are self-hauled to Seattle's transfer stations in a variety of vehicles that can be categorized into two primary subpopulations: passenger vehicles and trucks. Passenger vehicles include cars, station wagons, and sport utility vehicles (all without trailers); all others (mostly pick-up trucks, vans, and vehicles with trailers) are classified as trucks.

Figure 6-2 provides an overview of waste disposed by both vehicle types. This figure illustrates that **CDL wastes** accounted for a relatively large percentage of the total tonnage both for passenger vehicles and trucks, about 33% and 48%, respectively. **CDL wastes** includes components such as *clean dimensional lumber*, *other aggregates*, and *demo gypsum scrap*. **Organics** were prevalent both in passenger vehicle and truck waste, composing approximately 13% and 10% of the total tonnage respectively. **Organics** includes components such as *leaves and grass*, *food*, and *mixed textiles*.

Figure 6-2. Self-haul Composition Summary: by Vehicle Type
(January – December 2012)



6.2.1 Passenger Vehicles

Twenty-one passenger vehicle samples were characterized during the year 2012. Passenger vehicles disposed 6,285 tons of self-haul waste during this time. The composition estimates for this subpopulation were applied to the 6,285 tons to estimate the amount of waste disposed for each component category. As shown in Table 6-7, the top ten components sum to approximately 60% of the total tonnage. *Sand/soil/dirt* was the largest component, accounting for approximately 23% of the total. *Clean dimensional lumber*, *furniture*, and *other aggregates* were other large components of waste disposed by passenger vehicles (each accounting for more than 5%, by weight). The full composition results for passenger vehicles are listed in Table 6-9.

Table 6-7. Top Ten Components: Self-haul Passenger Vehicles
(January – December 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Sand/Soil/Dirt	23.1%	23.1%	1,453
Clean Dimension Lumber	7.3%	30.4%	456
Furniture	7.0%	37.4%	439
Other Aggregates	5.2%	42.6%	329
Food	3.7%	46.3%	233
Leaves and Grass	3.5%	49.9%	223
Mixed Metals/Material	3.3%	53.2%	209
Clean Engineered Wood	2.4%	55.6%	151
Contaminated Wood	2.3%	57.9%	146
Old Painted Wood	2.2%	60.1%	140
Total	**60.1%**		**3,780**

6.2.2 Trucks

A total of 205 self-haul truck loads were sampled during this study period. Trucks disposed 64,189 tons of self-haul waste during the 2012 calendar year. The composition estimates for this subpopulation were applied to the 64,189 tons to estimate the amount of waste disposed for each component category. As shown in Table 6-8, *furniture*, *clean dimensional lumber*, *demo gypsum scrap*, and *food* were among the most prevalent materials found in self-haul truck loads (each accounting for more than 5%, by weight). The top components accounted for approximately 47% of the total waste disposed by self-haul trucks in 2012. Please see Table 6-10 to view the full composition results for self-haul trucks.

Table 6-8. Top Ten Components: Self-haul Trucks
(January – December 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Furniture	6.3%	6.3%	4,012
Clean Dimension Lumber	6.0%	12.2%	3,827
Demo Gypsum Scrap	6.0%	18.2%	3,822
Food	5.0%	23.2%	3,226
Other Construction	4.5%	27.7%	2,869
New Painted Wood	4.3%	31.9%	2,743
Contaminated Wood	4.1%	36.0%	2,620
Mixed/Other Paper	3.9%	40.0%	2,533
Concrete	3.6%	43.6%	2,324
Mixed Low-grade Paper	3.6%	47.1%	2,281
Total	**47.1%**		**30,257**

6.2.3 Comparisons between Vehicle Types

Clean dimensional lumber, *furniture*, *food*, and *contaminated wood* were top ten components shared between passenger vehicles and trucks. *Sand/soil/dirt*, *other aggregates, leaves and grass,* and *clean engineered wood* were among the top ten components for passenger vehicles, but not for trucks. On the other hand, *demo gypsum scrap*, *other construction debris,* and *new painted wood* were top ten components for trucks, but not for passenger vehicles.

Table 6-9. Composition by Weight: Self-haul Passenger Vehicles
(January – December 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**4.5%**		**284**
Newspaper	0.0%	0.0%	1
Plain OCC/Kraft	1.1%	0.9%	72
Waxed OCC	0.0%	0.0%	1
Grocery/Shopping Bags	0.1%	0.1%	5
High-grade Paper	0.7%	0.0%	46
Mixed Low-grade Paper	1.7%	1.3%	106
Polycoated Containers	0.0%	0.0%	0
Compostable/Soiled	0.4%	0.1%	25
Pot. Comp. Single-use Food Service	0.0%	0.0%	0
Non-Comp. Single-use Food Service	0.0%	0.0%	1
Mixed/Other Paper	0.4%	0.2%	27
Plastic	**5.7%**		**359**
#1 PET Bottles	0.0%	0.0%	1
#2 HDPE Natural Bottles	0.0%	0.0%	0
#2 HDPE Colored Bottles	0.0%	0.0%	0
Other Bottles	0.0%	0.0%	3
Tubs	0.5%	0.5%	29
Expanded Poly. Non-food	0.1%	0.1%	6
Expanded Poly. Food-grade	0.0%	0.0%	0
Rigid Poly. Foam Insulation	0.2%	0.0%	14
Pot. Comp. Single-use Food Service	0.0%	0.0%	0
Non-Comp. Single-use Food Service	0.0%	0.0%	1
Other Rigid Packaging	0.1%	0.1%	7
Shopping/Dry Cleaning Bags	0.1%	0.0%	4
Stretch Wrap	0.0%	0.0%	1
Clean Polyethylene Film	0.0%	0.0%	1
Other Film	0.3%	0.2%	22
Plastic Pipe	0.1%	0.1%	4
Foam Carpet Padding	0.5%	0.5%	32
Durable Plastic Products	2.1%	0.8%	129
Plastic/Other Materials	1.7%	0.8%	106
Glass	**0.2%**		**15**
Clear Bottles	0.1%	0.0%	5
Green Bottles	0.0%	0.0%	0
Brown Bottles	0.0%	0.0%	2
Container Glass	0.0%	0.0%	0
Fluorescent Tubes	0.0%	0.0%	0
CFLs	0.0%	0.0%	2
Flat Glass	0.0%	0.0%	0
Automotive Glass	0.0%	0.0%	0
Other Glass	0.1%	0.1%	6
Metal	**6.4%**		**400**
Aluminum Beverage Cans	0.0%	0.0%	1
Aluminum Foil/Containers	0.0%	0.0%	1
Other Aluminum	0.1%	0.1%	5
Other Nonferrous	0.8%	0.0%	50
Steel Food Cans	0.0%	0.0%	2
Empty Aerosol Cans	0.0%	0.0%	0
Other Ferrous	2.1%	1.5%	132
Oil filters	0.0%	0.0%	0
Mixed Metals/Material	3.3%	2.1%	209
Organics	**12.5%**		**788**
Leaves and Grass	3.5%	4.9%	223
Prunings	0.4%	0.7%	27
Food	3.7%	1.9%	233
Fats, Oils, Grease	1.1%	0.0%	69
Textiles/Clothing	1.2%	0.7%	73
Mixed Textiles	0.7%	0.6%	47
Disposable Diapers	0.2%	0.0%	15
Animal By-products	0.8%	0.0%	51
Rubber Products	0.8%	0.2%	51
Tires	0.0%	0.0%	0

Material	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**12.6%**		**794**
Furniture	7.0%	2.2%	439
Mattresses	1.5%	0.6%	96
Small Appliances	1.5%	0.9%	93
Cell Phones	0.1%	0.0%	7
Audio/Visual Equipment	0.9%	0.0%	58
CRT Monitors	0.0%	0.0%	0
CRT Televisions	0.4%	0.0%	25
Other Electronics	1.2%	0.8%	76
CDL Wastes	**32.7%**		**2,052**
Clean Dimension Lumber	7.3%	3.2%	456
Clean Engineered Wood	2.4%	2.0%	151
Pallets	0.9%	1.0%	53
Crates	0.4%	0.0%	25
Other Untreated Wood	0.7%	0.9%	45
New Painted Wood	2.2%	2.5%	137
Old Painted Wood	2.2%	3.0%	140
Creosote-treated Wood	0.4%	0.0%	25
Other Treated Wood	1.0%	0.8%	64
Contaminated Wood	2.3%	1.1%	146
New Gypsum Scrap	0.2%	0.0%	12
Demo Gypsum Scrap	1.1%	1.8%	68
Carpet	1.0%	0.9%	63
Felt Carpet Pad	0.0%	0.0%	0
Fiberglass Insulation	0.1%	0.1%	7
Concrete	0.6%	0.8%	41
Asphalt Paving	0.7%	0.0%	43
Other Aggregates	5.2%	1.9%	329
Rock	0.4%	0.7%	28
Asphalt Shingles	0.0%	0.0%	0
Other Asphaltic Roofing	0.3%	0.3%	18
Ceramics	1.0%	1.3%	63
Cement Fiber Board	0.0%	0.0%	0
Single-ply Roofing Membranes	0.0%	0.0%	0
Ceiling Tiles	0.0%	0.0%	1
Other Construction	2.2%	1.8%	139
Hazardous	**1.9%**		**118**
Dried Latex Paint	0.0%	0.0%	0
Liquid Latex Paint	0.0%	0.0%	0
Solvent-based Adhesives	0.0%	0.0%	0
Water-based Adhesives	0.0%	0.0%	0
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	0
Pesticides/Herbicides	0.0%	0.1%	3
Rechargeable Batteries	0.0%	0.0%	0
Other Dry-cell Batteries	0.0%	0.0%	0
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil/Diesel Oil	1.3%	0.0%	80
Asbestos	0.4%	0.0%	26
Explosives	0.1%	0.0%	7
Medical Wastes	0.0%	0.0%	0
Other Cleaners/Chemicals	0.0%	0.0%	1
Other Potentially Harmful Waste	0.0%	0.0%	0
Fines and Misc Materials	**23.5%**		**1,475**
Sand/Soil/Dirt	23.1%	6.2%	1,453
Non-distinct Fines	0.2%	0.0%	14
Miscellaneous Organics	0.1%	0.1%	7
Miscellaneous Inorganics	0.0%	0.0%	1
Totals	**100%**		**6,285**
Sample Count	21		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 6-10. Composition by Weight: Self-haul Trucks
(January – December 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**15.4%**		**9,863**
Newspaper	0.8%	0.2%	493
Plain OCC/Kraft	1.5%	0.6%	965
Waxed OCC	0.2%	0.3%	141
Grocery/Shopping Bags	0.1%	0.0%	39
High-grade Paper	1.3%	0.5%	859
Mixed Low-grade Paper	3.6%	1.1%	2,281
Polycoated Containers	0.2%	0.1%	142
Compostable/Soiled	2.0%	0.8%	1,270
Pot. Comp. Single-use Food Service	0.6%	0.3%	405
Non-Comp. Single-use Food Service	1.1%	0.4%	735
Mixed/Other Paper	3.9%	0.4%	2,533
Plastic	**7.5%**		**4,796**
#1 PET Bottles	0.4%	0.1%	226
#2 HDPE Natural Bottles	0.1%	0.1%	84
#2 HDPE Colored Bottles	0.1%	0.0%	85
Other Bottles	0.0%	0.0%	19
Tubs	0.4%	0.2%	274
Expanded Poly. Non-food	0.1%	0.0%	44
Expanded Poly. Food-grade	0.0%	0.0%	14
Rigid Poly. Foam Insulation	0.0%	0.0%	7
Pot. Comp. Single-use Food Service	0.0%	0.0%	3
Non-Comp. Single-use Food Service	0.3%	0.1%	182
Other Rigid Packaging	0.2%	0.1%	136
Shopping/Dry Cleaning Bags	0.0%	0.0%	7
Stretch Wrap	0.0%	0.0%	31
Clean Polyethylene Film	0.0%	0.0%	7
Other Film	1.9%	0.4%	1,237
Plastic Pipe	0.0%	0.0%	20
Foam Carpet Padding	0.6%	0.5%	370
Durable Plastic Products	2.1%	0.7%	1,317
Plastic/Other Materials	1.1%	0.3%	733
Glass	**2.5%**		**1,605**
Clear Bottles	0.4%	0.5%	259
Green Bottles	0.1%	0.1%	37
Brown Bottles	0.5%	0.8%	325
Container Glass	0.0%	0.0%	0
Fluorescent Tubes	0.0%	0.0%	3
CFLs	0.0%	0.0%	2
Flat Glass	0.8%	0.3%	496
Automotive Glass	0.0%	0.0%	0
Other Glass	0.8%	0.4%	482
Metal	**3.7%**		**2,381**
Aluminum Beverage Cans	0.1%	0.0%	71
Aluminum Foil/Containers	0.1%	0.0%	32
Other Aluminum	0.1%	0.0%	46
Other Nonferrous	0.2%	0.1%	138
Steel Food Cans	0.0%	0.0%	23
Empty Aerosol Cans	0.0%	0.0%	22
Other Ferrous	1.4%	0.4%	869
Oil filters	0.0%	0.0%	3
Mixed Metals/Material	1.8%	0.5%	1,177
Organics	**10.4%**		**6,657**
Leaves and Grass	2.1%	1.0%	1,335
Prunings	0.0%	0.0%	17
Food	5.0%	0.6%	3,226
Fats, Oils, Grease	0.0%	0.0%	2
Textiles/Clothing	0.7%	0.4%	478
Mixed Textiles	1.3%	0.7%	839
Disposable Diapers	0.1%	0.0%	41
Animal By-products	0.2%	0.1%	145
Rubber Products	0.6%	0.5%	400
Tires	0.3%	0.3%	174

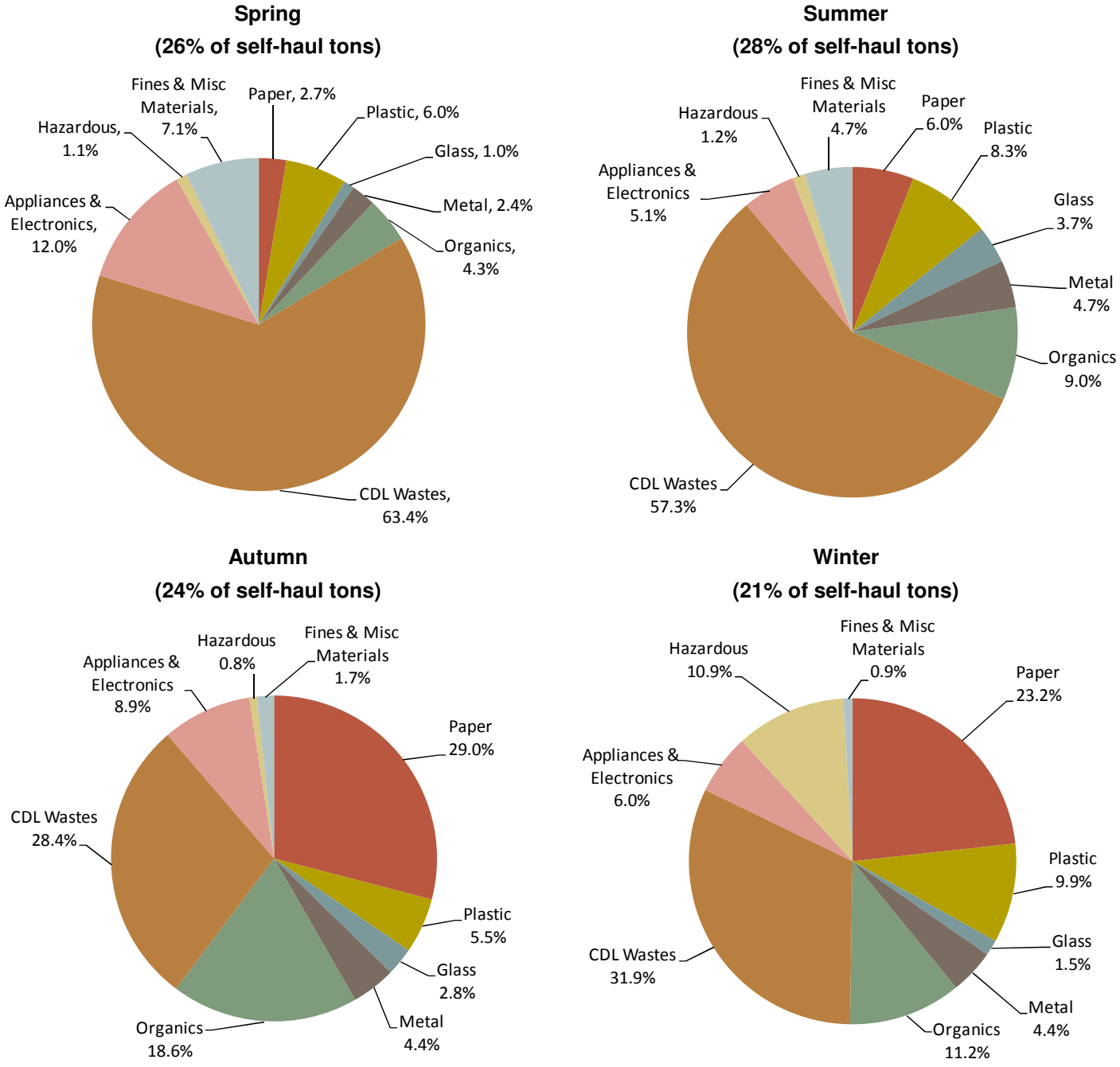
Material	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**7.6%**		**4,883**
Furniture	6.3%	1.8%	4,012
Mattresses	0.8%	0.4%	498
Small Appliances	0.2%	0.1%	138
Cell Phones	0.0%	0.0%	2
Audio/Visual Equipment	0.1%	0.1%	90
CRT Monitors	0.0%	0.0%	19
CRT Televisions	0.0%	0.0%	0
Other Electronics	0.2%	0.1%	123
CDL Wastes	**47.9%**		**30,717**
Clean Dimension Lumber	6.0%	1.6%	3,827
Clean Engineered Wood	3.4%	1.5%	2,210
Pallets	1.5%	1.2%	963
Crates	0.1%	0.1%	62
Other Untreated Wood	0.5%	0.5%	338
New Painted Wood	4.3%	1.2%	2,743
Old Painted Wood	2.5%	1.3%	1,618
Creosote-treated Wood	0.2%	0.2%	114
Other Treated Wood	3.3%	1.3%	2,137
Contaminated Wood	4.1%	1.2%	2,620
New Gypsum Scrap	0.6%	0.6%	356
Demo Gypsum Scrap	6.0%	2.6%	3,822
Carpet	3.4%	1.0%	2,192
Felt Carpet Pad	0.3%	0.2%	174
Fiberglass Insulation	0.4%	0.3%	232
Concrete	3.6%	1.5%	2,324
Asphalt Paving	0.0%	0.0%	0
Other Aggregates	1.5%	0.8%	965
Rock	0.0%	0.0%	12
Asphalt Shingles	0.4%	0.6%	285
Other Asphaltic Roofing	0.1%	0.1%	92
Ceramics	0.9%	0.7%	586
Cement Fiber Board	0.1%	0.1%	68
Single-ply Roofing Membranes	0.2%	0.2%	97
Ceiling Tiles	0.0%	0.0%	12
Other Construction	4.5%	1.2%	2,869
Hazardous	**3.3%**		**2,090**
Dried Latex Paint	0.0%	0.1%	32
Liquid Latex Paint	0.1%	0.1%	61
Solvent-based Adhesives	0.1%	0.1%	32
Water-based Adhesives	0.1%	0.1%	50
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	13
Pesticides/Herbicides	0.1%	0.1%	54
Rechargeable Batteries	0.0%	0.0%	11
Other Dry-cell Batteries	0.0%	0.0%	6
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	3
Motor Oil/Diesel Oil	0.0%	0.0%	0
Asbestos	0.0%	0.0%	0
Explosives	0.0%	0.0%	0
Medical Wastes	2.6%	2.7%	1,660
Other Cleaners/Chemicals	0.2%	0.2%	151
Other Potentially Harmful Waste	0.0%	0.0%	16
Fines and Misc Materials	**1.9%**		**1,198**
Sand/Soil/Dirt	1.3%	1.0%	809
Non-distinct Fines	0.0%	0.0%	26
Miscellaneous Organics	0.4%	0.4%	288
Miscellaneous Inorganics	0.1%	0.1%	75
Totals	**100%**		**64,189**
Sample Count	205		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

6.3 Self-haul Composition by Season

As shown in Figure 6-3, **CDL wastes** accounted for a substantial portion of the self-haul substream during every season of 2012. **CDL wastes** disposal was most prevalent in the spring, at 63%. In addition, **paper** and **organics** composed a relatively large portion of the waste stream in autumn and winter, with **paper** at 29% in autumn and 23% in winter, and **organics** at approximately 19% in autumn and 11% in winter. **CDL wastes** includes such components as *clean dimensional lumber*, *concrete*, and *demo gypsum scrap*. **Paper** includes components like *mixed/other paper, mixed low-grade paper* and *plain OCC/Kraft.* **Organics** includes components such as *carpet*, *food*, and *leaves and grass*.

Figure 6-3. Self-haul Composition Summary: by Season



6.3.1 Spring

A total of 37 self-haul samples were taken during the spring months of 2012 (March through May). Self-haul vehicles disposed of 18,602 tons waste during the spring of 2012. The composition estimates for this subpopulation were applied to the 18,602 tons to estimate the amount of waste disposed for each component category. As shown in Table 6-11, the top ten components summed to approximately 66% of the total spring tonnage. *Demo gypsum scrap* was the largest single component, accounting for about 14% of the total, by weight. *Furniture*, *clean dimensional lumber*, *old painted wood*, and *sand/soil/dirt* were also large components of waste sampled in the spring. Table 6-15 lists the full composition results for the spring.

Table 6-11. Top Ten Components: Self-haul in Spring
(March – May 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Demo Gypsum Scrap	13.6%	13.6%	2,529
Furniture	10.0%	23.6%	1,866
Clean Dimension Lumber	7.7%	31.3%	1,427
Old Painted Wood	7.5%	38.8%	1,395
Sand/Soil/Dirt	6.1%	44.9%	1,126
Clean Engineered Wood	4.6%	49.5%	856
Other Treated Wood	4.2%	53.7%	785
Concrete	4.1%	57.8%	760
Other Construction	4.0%	61.8%	746
Pallets	4.0%	65.8%	745
Total	**65.8%**		**12,236**

6.3.2 Summer

During the summer, 75 self-haul loads were sampled. Self-haul vehicles disposed 19,720 tons of waste during that time. The composition estimates were applied to the 19,720 tons to estimate the amount of waste disposed for each component category. Table 6-12 contains a list of the top ten components, which summed to about 56% of the total summer tonnage. *Clean dimensional lumber*, *new painted wood*, *other construction debris*, *clean engineered wood*, and *concrete* were all large components of waste disposed in the summer (each greater than 5%, by weight). Refer to Table 6-16 for the complete summer composition results.

Table 6-12. Top Ten Components: Self-haul in Summer
(June – August 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Clean Dimension Lumber	9.7%	9.7%	1,922
New Painted Wood	7.6%	17.3%	1,490
Other Construction	6.2%	23.5%	1,218
Clean Engineered Wood	6.0%	29.5%	1,187
Concrete	5.1%	34.6%	1,008
Furniture	4.5%	39.1%	881
Sand/Soil/Dirt	4.5%	43.5%	880
Contaminated Wood	4.4%	48.0%	876
Other Treated Wood	4.2%	52.2%	826
Leaves and Grass	4.0%	56.2%	797
Total	**56.2%**		**11,084**

6.3.3 Autumn

A total of 37 self-haul loads were sampled during the autumn (September through November 2012). Self-haul loads during the autumn amounted to 17,147 tons of waste. The composition estimates for this subpopulation were applied to the 17,147 tons to estimate the amount of waste disposed for each component category. As shown in Table 6-13, *food* (12.5%) was the single largest component of self-haul waste disposed during the autumn months. When combined, the top ten components accounted for approximately 57% of the total, by weight. Table 6-17 lists the detailed composition results for samples taken from September to November 2012.

Table 6-13. Top Ten Components: Self-haul in Autumn
(September – November 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Food	12.5%	12.5%	2,152
Mixed/Other Paper	11.6%	24.2%	1,990
Furniture	6.6%	30.8%	1,139
Mixed Low-grade Paper	6.0%	36.8%	1,021
Contaminated Wood	4.2%	41.0%	720
Clean Dimension Lumber	3.3%	44.2%	565
Other Construction	3.3%	47.5%	560
Carpet	3.2%	50.7%	550
High-grade Paper	3.1%	53.8%	530
Concrete	2.7%	56.5%	462
Total	**56.5%**		**9,689**

6.3.4 Winter

For the winter season of 2012, a total of 77 samples were taken from self-haul loads. Self-haul vehicles disposed 15,004 tons waste during January, February, and December 2012. The composition estimates for this subpopulation were applied to the 15,004 tons to estimate the amount of waste disposed for each component category. Table 6-14 lists the top ten components of waste disposed during the winter, which summed to approximately 50% of the total, by weight. *Medical wastes* made up about 10% of the self-haul waste in winter, by weight. *Food*, *mixed low-grade paper*, and *compostable/soiled paper* were also large components of the waste disposed in the winter, each at more than 5% of the total. Please see Table 6-18 for a list of the detailed composition results.

Table 6-14. Top Ten Components: Self-haul in Winter
(January, February, and December 2012)

Material	Est. Percent	Cum. Percent	Est. Tons
Medical Wastes	10.4%	10.4%	1,559
Food	6.2%	16.6%	933
Mixed Low-grade Paper	5.7%	22.3%	854
Compostable/Soiled	5.5%	27.8%	832
New Painted Wood	4.7%	32.6%	709
Carpet	4.6%	37.1%	684
Furniture	3.8%	40.9%	565
Plain OCC/Kraft	3.3%	44.2%	493
Other Construction	3.2%	47.4%	483
Contaminated Wood	3.0%	50.4%	447
Total	**50.4%**		**7,560**

6.3.5 Comparisons among Seasons

Furniture and *other construction debris* were top ten components across all four seasons. *Demo gypsum scrap* and *old painted wood* were top ten components only during the spring, while *leaves and grass* was a top ten component specific to the summer; *mixed/other paper* and *high-grade paper* were included in the top ten components only during autumn; and *medical wastes* and *compostable/soiled paper* were top ten components only in the winter.

Table 6-15. Composition by Weight: Self-haul in Spring
(March – May 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**2.7%**		**494**
Newspaper	0.0%	0.0%	5
Plain OCC/Kraft	0.8%	0.6%	154
Waxed OCC	0.4%	0.7%	82
Grocery/Shopping Bags	0.0%	0.0%	5
High-grade Paper	0.3%	0.3%	49
Mixed Low-grade Paper	0.6%	0.5%	110
Polycoated Containers	0.0%	0.0%	0
Compostable/Soiled	0.2%	0.1%	43
Pot. Comp. Single-use Food Service	0.0%	0.0%	0
Non-Comp. Single-use Food Service	0.0%	0.0%	2
Mixed/Other Paper	0.2%	0.2%	44
Plastic	**6.0%**		**1,108**
#1 PET Bottles	0.0%	0.0%	2
#2 HDPE Natural Bottles	0.0%	0.0%	1
#2 HDPE Colored Bottles	0.0%	0.0%	0
Other Bottles	0.0%	0.0%	0
Tubs	0.4%	0.4%	73
Expanded Poly. Non-food	0.0%	0.0%	0
Expanded Poly. Food-grade	0.0%	0.0%	0
Rigid Poly. Foam Insulation	0.0%	0.0%	6
Pot. Comp. Single-use Food Service	0.0%	0.0%	0
Non-Comp. Single-use Food Service	0.0%	0.0%	4
Other Rigid Packaging	0.1%	0.1%	21
Shopping/Dry Cleaning Bags	0.0%	0.0%	2
Stretch Wrap	0.0%	0.0%	1
Clean Polyethylene Film	0.0%	0.0%	2
Other Film	0.8%	0.4%	144
Plastic Pipe	0.1%	0.1%	10
Foam Carpet Padding	1.3%	1.5%	234
Durable Plastic Products	1.8%	1.1%	337
Plastic/Other Materials	1.5%	0.9%	270
Glass	**1.0%**		**190**
Clear Bottles	0.0%	0.0%	5
Green Bottles	0.0%	0.0%	0
Brown Bottles	0.0%	0.0%	4
Container Glass	0.0%	0.0%	0
Fluorescent Tubes	0.0%	0.0%	1
CFLs	0.0%	0.0%	2
Flat Glass	0.0%	0.0%	0
Automotive Glass	0.0%	0.0%	0
Other Glass	1.0%	1.1%	179
Metal	**2.4%**		**442**
Aluminum Beverage Cans	0.0%	0.0%	2
Aluminum Foil/Containers	0.0%	0.0%	1
Other Aluminum	0.1%	0.1%	21
Other Nonferrous	0.0%	0.0%	2
Steel Food Cans	0.0%	0.0%	4
Empty Aerosol Cans	0.0%	0.0%	1
Other Ferrous	1.1%	0.6%	201
Oil filters	0.0%	0.0%	2
Mixed Metals/Material	1.1%	0.6%	208
Organics	**4.3%**		**804**
Leaves and Grass	0.7%	0.9%	131
Prunings	0.1%	0.1%	10
Food	0.1%	0.1%	24
Fats, Oils, Grease	0.0%	0.0%	0
Textiles/Clothing	1.2%	1.2%	229
Mixed Textiles	1.7%	2.2%	319
Disposable Diapers	0.0%	0.0%	0
Animal By-products	0.4%	0.3%	67
Rubber Products	0.1%	0.1%	23
Tires	0.0%	0.0%	0

Material	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**12.0%**		**2,241**
Furniture	10.0%	4.6%	1,866
Mattresses	1.2%	1.0%	223
Small Appliances	0.4%	0.4%	67
Cell Phones	0.0%	0.0%	0
Audio/Visual Equipment	0.1%	0.0%	10
CRT Monitors	0.1%	0.1%	14
CRT Televisions	0.0%	0.0%	0
Other Electronics	0.3%	0.3%	59
CDL Wastes	**63.4%**		**11,799**
Clean Dimension Lumber	7.7%	4.4%	1,427
Clean Engineered Wood	4.6%	4.2%	856
Pallets	4.0%	4.1%	745
Crates	0.1%	0.2%	28
Other Untreated Wood	0.0%	0.0%	1
New Painted Wood	3.6%	2.2%	675
Old Painted Wood	7.5%	4.5%	1,395
Creosote-treated Wood	0.0%	0.0%	0
Other Treated Wood	4.2%	3.3%	785
Contaminated Wood	3.9%	2.1%	723
New Gypsum Scrap	1.5%	2.1%	284
Demo Gypsum Scrap	13.6%	8.0%	2,529
Carpet	2.5%	2.0%	468
Felt Carpet Pad	0.0%	0.0%	0
Fiberglass Insulation	0.5%	0.9%	101
Concrete	4.1%	3.9%	760
Asphalt Paving	0.0%	0.0%	0
Other Aggregates	0.8%	1.1%	151
Rock	0.0%	0.0%	0
Asphalt Shingles	0.0%	0.1%	6
Other Asphaltic Roofing	0.2%	0.3%	36
Ceramics	0.2%	0.3%	36
Cement Fiber Board	0.2%	0.3%	38
Single-ply Roofing Membranes	0.0%	0.1%	7
Ceiling Tiles	0.0%	0.0%	1
Other Construction	4.0%	2.4%	746
Hazardous	**1.1%**		**198**
Dried Latex Paint	0.1%	0.2%	23
Liquid Latex Paint	0.1%	0.1%	23
Solvent-based Adhesives	0.0%	0.0%	2
Water-based Adhesives	0.3%	0.4%	50
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.1%	0.1%	11
Pesticides/Herbicides	0.0%	0.1%	7
Rechargeable Batteries	0.0%	0.0%	0
Other Dry-cell Batteries	0.0%	0.0%	1
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil/Diesel Oil	0.0%	0.0%	0
Asbestos	0.0%	0.0%	0
Explosives	0.0%	0.0%	0
Medical Wastes	0.0%	0.0%	0
Other Cleaners/Chemicals	0.4%	0.6%	69
Other Potentially Harmful Waste	0.1%	0.1%	12
Fines and Misc Materials	**7.1%**		**1,328**
Sand/Soil/Dirt	6.1%	0.8%	1,126
Non-distinct Fines	0.1%	0.1%	12
Miscellaneous Organics	0.9%	1.3%	176
Miscellaneous Inorganics	0.1%	0.1%	14
Totals	**100%**		**18,602**
Sample Count	37		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 6-16. Composition by Weight: Self-haul in Summer
(June – August 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**6.0%**		**1,183**
Newspaper	0.2%	0.2%	36
Plain OCC/Kraft	1.3%	0.9%	259
Waxed OCC	0.0%	0.0%	0
Grocery/Shopping Bags	0.1%	0.0%	15
High-grade Paper	0.3%	0.3%	59
Mixed Low-grade Paper	2.0%	0.9%	402
Polycoated Containers	0.1%	0.1%	16
Compostable/Soiled	0.8%	0.8%	152
Pot. Comp. Single-use Food Service	0.0%	0.0%	0
Non-Comp. Single-use Food Service	0.2%	0.2%	37
Mixed/Other Paper	1.1%	0.5%	208
Plastic	**8.3%**		**1,629**
#1 PET Bottles	0.2%	0.2%	42
#2 HDPE Natural Bottles	0.1%	0.1%	16
#2 HDPE Colored Bottles	0.1%	0.1%	19
Other Bottles	0.0%	0.0%	1
Tubs	0.3%	0.2%	65
Expanded Poly. Non-food	0.1%	0.1%	26
Expanded Poly. Food-grade	0.0%	0.0%	4
Rigid Poly. Foam Insulation	0.0%	0.0%	3
Pot. Comp. Single-use Food Service	0.0%	0.0%	0
Non-Comp. Single-use Food Service	0.1%	0.1%	25
Other Rigid Packaging	0.2%	0.1%	42
Shopping/Dry Cleaning Bags	0.0%	0.0%	4
Stretch Wrap	0.1%	0.1%	25
Clean Polyethylene Film	0.0%	0.0%	0
Other Film	1.2%	0.6%	239
Plastic Pipe	0.1%	0.1%	12
Foam Carpet Padding	0.4%	0.3%	82
Durable Plastic Products	3.6%	2.0%	706
Plastic/Other Materials	1.6%	0.6%	318
Glass	**3.7%**		**724**
Clear Bottles	1.1%	1.6%	210
Green Bottles	0.0%	0.0%	5
Brown Bottles	1.6%	2.6%	317
Container Glass	0.0%	0.0%	0
Fluorescent Tubes	0.0%	0.0%	0
CFLs	0.0%	0.0%	1
Flat Glass	0.4%	0.6%	70
Automotive Glass	0.0%	0.0%	0
Other Glass	0.6%	0.4%	121
Metal	**4.7%**		**918**
Aluminum Beverage Cans	0.0%	0.0%	6
Aluminum Foil/Containers	0.0%	0.0%	1
Other Aluminum	0.0%	0.0%	3
Other Nonferrous	0.2%	0.2%	36
Steel Food Cans	0.0%	0.0%	8
Empty Aerosol Cans	0.1%	0.1%	19
Other Ferrous	1.8%	0.8%	346
Oil filters	0.0%	0.0%	0
Mixed Metals/Material	2.5%	1.4%	498
Organics	**9.0%**		**1,782**
Leaves and Grass	4.0%	2.7%	797
Prunings	0.1%	0.1%	10
Food	1.8%	1.2%	351
Fats, Oils, Grease	0.0%	0.0%	0
Textiles/Clothing	0.7%	0.5%	131
Mixed Textiles	1.0%	0.5%	194
Disposable Diapers	0.1%	0.1%	20
Animal By-products	0.4%	0.4%	79
Rubber Products	0.5%	0.5%	92
Tires	0.5%	0.8%	108

Material	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**5.1%**		**1,015**
Furniture	4.5%	2.5%	881
Mattresses	0.2%	0.2%	42
Small Appliances	0.0%	0.0%	0
Cell Phones	0.0%	0.0%	0
Audio/Visual Equipment	0.2%	0.1%	33
CRT Monitors	0.0%	0.0%	0
CRT Televisions	0.0%	0.0%	0
Other Electronics	0.3%	0.3%	59
CDL Wastes	**57.3%**		**11,307**
Clean Dimension Lumber	9.7%	2.9%	1,922
Clean Engineered Wood	6.0%	2.7%	1,187
Pallets	1.0%	0.9%	202
Crates	0.1%	0.2%	26
Other Untreated Wood	0.1%	0.2%	23
New Painted Wood	7.6%	3.1%	1,490
Old Painted Wood	0.0%	0.0%	0
Creosote-treated Wood	0.3%	0.6%	69
Other Treated Wood	4.2%	2.6%	826
Contaminated Wood	4.4%	2.2%	876
New Gypsum Scrap	0.1%	0.1%	12
Demo Gypsum Scrap	3.7%	2.6%	723
Carpet	2.8%	1.5%	552
Felt Carpet Pad	0.2%	0.2%	30
Fiberglass Insulation	0.2%	0.3%	44
Concrete	5.1%	2.5%	1,008
Asphalt Paving	0.0%	0.0%	0
Other Aggregates	2.4%	1.9%	478
Rock	0.1%	0.2%	28
Asphalt Shingles	1.3%	1.9%	254
Other Asphaltic Roofing	0.3%	0.3%	65
Ceramics	1.2%	0.9%	232
Cement Fiber Board	0.0%	0.0%	0
Single-ply Roofing Membranes	0.2%	0.4%	44
Ceiling Tiles	0.0%	0.0%	0
Other Construction	6.2%	2.7%	1,218
Hazardous	**1.2%**		**244**
Dried Latex Paint	0.0%	0.0%	0
Liquid Latex Paint	0.1%	0.1%	26
Solvent-based Adhesives	0.0%	0.0%	0
Water-based Adhesives	0.0%	0.0%	0
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	2
Pesticides/Herbicides	0.2%	0.3%	46
Rechargeable Batteries	0.0%	0.1%	6
Other Dry-cell Batteries	0.0%	0.0%	1
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil/Diesel Oil	0.0%	0.0%	0
Asbestos	0.0%	0.0%	0
Explosives	0.0%	0.0%	0
Medical Wastes	0.5%	0.8%	93
Other Cleaners/Chemicals	0.3%	0.5%	66
Other Potentially Harmful Waste	0.0%	0.0%	4
Fines and Misc Materials	**4.7%**		**918**
Sand/Soil/Dirt	4.5%	3.4%	880
Non-distinct Fines	0.0%	0.0%	0
Miscellaneous Organics	0.1%	0.1%	20
Miscellaneous Inorganics	0.1%	0.1%	18
Totals	**100%**		**19,720**
Sample Count	75		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 6-17. Composition by Weight: Self-haul in Autumn
(September – November 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**29.0%**		**4,981**
Newspaper	2.2%	0.6%	378
Plain OCC/Kraft	0.8%	0.5%	131
Waxed OCC	0.0%	0.0%	1
Grocery/Shopping Bags	0.1%	0.0%	23
High-grade Paper	3.1%	0.1%	530
Mixed Low-grade Paper	6.0%	0.4%	1,021
Polycoated Containers	0.3%	0.0%	57
Compostable/Soiled	1.6%	0.0%	267
Pot. Comp. Single-use Food Service	1.5%	0.0%	264
Non-Comp. Single-use Food Service	1.9%	0.0%	319
Mixed/Other Paper	11.6%	0.4%	1,990
Plastic	**5.5%**		**940**
#1 PET Bottles	0.6%	0.0%	96
#2 HDPE Natural Bottles	0.0%	0.0%	8
#2 HDPE Colored Bottles	0.3%	0.0%	58
Other Bottles	0.1%	0.0%	20
Tubs	0.2%	0.0%	38
Expanded Poly. Non-food	0.0%	0.0%	2
Expanded Poly. Food-grade	0.0%	0.0%	0
Rigid Poly. Foam Insulation	0.0%	0.0%	0
Pot. Comp. Single-use Food Service	0.0%	0.0%	0
Non-Comp. Single-use Food Service	0.3%	0.0%	49
Other Rigid Packaging	0.0%	0.0%	3
Shopping/Dry Cleaning Bags	0.0%	0.0%	1
Stretch Wrap	0.0%	0.0%	1
Clean Polyethylene Film	0.0%	0.0%	3
Other Film	2.6%	0.2%	450
Plastic Pipe	0.0%	0.0%	2
Foam Carpet Padding	0.1%	0.0%	13
Durable Plastic Products	0.7%	0.3%	113
Plastic/Other Materials	0.5%	0.3%	84
Glass	**2.8%**		**474**
Clear Bottles	0.1%	0.0%	16
Green Bottles	0.0%	0.0%	3
Brown Bottles	0.0%	0.0%	0
Container Glass	0.0%	0.0%	0
Fluorescent Tubes	0.0%	0.0%	1
CFLs	0.0%	0.0%	0
Flat Glass	2.5%	0.7%	420
Automotive Glass	0.0%	0.0%	0
Other Glass	0.2%	0.2%	33
Metal	**4.4%**		**757**
Aluminum Beverage Cans	0.3%	0.0%	56
Aluminum Foil/Containers	0.2%	0.0%	26
Other Aluminum	0.1%	0.0%	25
Other Nonferrous	0.6%	0.4%	109
Steel Food Cans	0.0%	0.0%	1
Empty Aerosol Cans	0.0%	0.0%	0
Other Ferrous	1.7%	1.0%	293
Oil filters	0.0%	0.0%	1
Mixed Metals/Material	1.4%	0.8%	246
Organics	**18.6%**		**3,184**
Leaves and Grass	2.1%	2.3%	365
Prunings	0.1%	0.3%	23
Food	12.5%	0.4%	2,152
Fats, Oils, Grease	0.1%	0.0%	25
Textiles/Clothing	0.4%	0.2%	77
Mixed Textiles	1.7%	0.3%	292
Disposable Diapers	0.1%	0.0%	25
Animal By-products	0.0%	0.0%	8
Rubber Products	1.2%	1.7%	213
Tires	0.0%	0.0%	4

Material	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**8.9%**		**1,521**
Furniture	6.6%	2.9%	1,139
Mattresses	0.6%	0.7%	105
Small Appliances	0.6%	0.4%	105
Cell Phones	0.0%	0.0%	3
Audio/Visual Equipment	0.5%	0.2%	84
CRT Monitors	0.0%	0.0%	0
CRT Televisions	0.1%	0.0%	24
Other Electronics	0.4%	0.2%	61
CDL Wastes	**28.4%**		**4,873**
Clean Dimension Lumber	3.3%	1.4%	565
Clean Engineered Wood	0.0%	0.0%	0
Pallets	0.0%	0.0%	0
Crates	0.0%	0.0%	1
Other Untreated Wood	1.8%	1.8%	304
New Painted Wood	0.0%	0.0%	6
Old Painted Wood	2.1%	1.5%	359
Creosote-treated Wood	0.1%	0.0%	24
Other Treated Wood	1.5%	1.0%	260
Contaminated Wood	4.2%	2.5%	720
New Gypsum Scrap	0.0%	0.0%	0
Demo Gypsum Scrap	2.1%	2.7%	354
Carpet	3.2%	2.0%	550
Felt Carpet Pad	0.4%	0.6%	77
Fiberglass Insulation	0.0%	0.0%	3
Concrete	2.7%	2.6%	462
Asphalt Paving	0.0%	0.0%	0
Other Aggregates	1.9%	1.6%	323
Rock	0.0%	0.0%	0
Asphalt Shingles	0.0%	0.0%	0
Other Asphaltic Roofing	0.1%	0.1%	9
Ceramics	1.7%	2.3%	295
Cement Fiber Board	0.0%	0.0%	0
Single-ply Roofing Membranes	0.0%	0.0%	0
Ceiling Tiles	0.0%	0.0%	0
Other Construction	3.3%	2.1%	560
Hazardous	**0.8%**		**129**
Dried Latex Paint	0.0%	0.0%	3
Liquid Latex Paint	0.0%	0.0%	0
Solvent-based Adhesives	0.1%	0.2%	25
Water-based Adhesives	0.0%	0.0%	0
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	0
Pesticides/Herbicides	0.0%	0.0%	0
Rechargeable Batteries	0.0%	0.0%	5
Other Dry-cell Batteries	0.0%	0.0%	4
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil/Diesel Oil	0.3%	0.0%	48
Asbestos	0.2%	0.0%	26
Explosives	0.0%	0.0%	0
Medical Wastes	0.0%	0.1%	8
Other Cleaners/Chemicals	0.1%	0.1%	10
Other Potentially Harmful Waste	0.0%	0.0%	0
Fines and Misc Materials	**1.7%**		**289**
Sand/Soil/Dirt	1.2%	1.6%	205
Non-distinct Fines	0.0%	0.0%	2
Miscellaneous Organics	0.5%	0.6%	80
Miscellaneous Inorganics	0.0%	0.0%	2
Totals	**100%**		**17,147**
Sample Count	37		

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 6-18. Composition by Weight: Self-haul in Winter
(January, February, and December 2012)

Material	Est. Percent	+ / -	Est. Tons
Paper	**23.2%**		**3,488**
Newspaper	0.5%	0.5%	75
Plain OCC/Kraft	3.3%	2.2%	493
Waxed OCC	0.4%	0.6%	59
Grocery/Shopping Bags	0.0%	0.0%	2
High-grade Paper	1.8%	2.3%	266
Mixed Low-grade Paper	5.7%	4.6%	854
Polycoated Containers	0.5%	0.4%	69
Compostable/Soiled	5.5%	3.4%	832
Pot. Comp. Single-use Food Service	0.9%	1.2%	141
Non-Comp. Single-use Food Service	2.5%	1.9%	378
Mixed/Other Paper	2.1%	1.3%	318
Plastic	**9.9%**		**1,478**
#1 PET Bottles	0.6%	0.5%	87
#2 HDPE Natural Bottles	0.4%	0.3%	60
#2 HDPE Colored Bottles	0.1%	0.0%	9
Other Bottles	0.0%	0.0%	1
Tubs	0.8%	0.5%	126
Expanded Poly. Non-food	0.1%	0.1%	22
Expanded Poly. Food-grade	0.1%	0.1%	10
Rigid Poly. Foam Insulation	0.1%	0.0%	11
Pot. Comp. Single-use Food Service	0.0%	0.0%	3
Non-Comp. Single-use Food Service	0.7%	0.5%	105
Other Rigid Packaging	0.5%	0.5%	76
Shopping/Dry Cleaning Bags	0.0%	0.0%	3
Stretch Wrap	0.0%	0.0%	5
Clean Polyethylene Film	0.0%	0.0%	3
Other Film	2.8%	1.6%	425
Plastic Pipe	0.0%	0.0%	0
Foam Carpet Padding	0.5%	0.4%	73
Durable Plastic Products	1.9%	1.2%	290
Plastic/Other Materials	1.1%	0.5%	167
Glass	**1.5%**		**232**
Clear Bottles	0.2%	0.3%	33
Green Bottles	0.2%	0.2%	29
Brown Bottles	0.0%	0.1%	7
Container Glass	0.0%	0.0%	0
Fluorescent Tubes	0.0%	0.0%	1
CFLs	0.0%	0.0%	1
Flat Glass	0.0%	0.0%	6
Automotive Glass	0.0%	0.0%	0
Other Glass	1.0%	0.9%	155
Metal	**4.4%**		**665**
Aluminum Beverage Cans	0.1%	0.0%	8
Aluminum Foil/Containers	0.0%	0.0%	4
Other Aluminum	0.0%	0.0%	3
Other Nonferrous	0.3%	0.0%	41
Steel Food Cans	0.1%	0.1%	13
Empty Aerosol Cans	0.0%	0.0%	2
Other Ferrous	1.1%	0.5%	161
Oil filters	0.0%	0.0%	0
Mixed Metals/Material	2.9%	1.2%	434
Organics	**11.2%**		**1,675**
Leaves and Grass	1.8%	1.6%	266
Prunings	0.0%	0.0%	0
Food	6.2%	2.2%	933
Fats, Oils, Grease	0.3%	0.0%	46
Textiles/Clothing	0.8%	0.4%	114
Mixed Textiles	0.5%	0.3%	81
Disposable Diapers	0.1%	0.0%	9
Animal By-products	0.3%	0.0%	42
Rubber Products	0.8%	0.7%	123
Tires	0.4%	0.5%	62

Material	Est. Percent	+ / -	Est. Tons
Appliances and Electronics	**6.0%**		**899**
Furniture	3.8%	1.8%	565
Mattresses	1.5%	1.0%	223
Small Appliances	0.4%	0.2%	59
Cell Phones	0.0%	0.0%	5
Audio/Visual Equipment	0.1%	0.1%	21
CRT Monitors	0.0%	0.1%	5
CRT Televisions	0.0%	0.0%	2
Other Electronics	0.1%	0.1%	19
CDL Wastes	**31.9%**		**4,791**
Clean Dimension Lumber	2.5%	1.2%	368
Clean Engineered Wood	2.1%	1.1%	318
Pallets	0.5%	0.5%	70
Crates	0.2%	0.1%	34
Other Untreated Wood	0.4%	0.4%	54
New Painted Wood	4.7%	1.6%	709
Old Painted Wood	0.0%	0.0%	3
Creosote-treated Wood	0.3%	0.4%	46
Other Treated Wood	2.2%	1.3%	330
Contaminated Wood	3.0%	1.3%	447
New Gypsum Scrap	0.5%	0.5%	72
Demo Gypsum Scrap	1.9%	1.4%	284
Carpet	4.6%	1.9%	684
Felt Carpet Pad	0.5%	0.4%	68
Fiberglass Insulation	0.6%	0.4%	92
Concrete	0.9%	0.7%	134
Asphalt Paving	0.3%	0.0%	43
Other Aggregates	2.3%	0.9%	342
Rock	0.1%	0.1%	12
Asphalt Shingles	0.2%	0.3%	26
Other Asphaltic Roofing	0.0%	0.0%	0
Ceramics	0.6%	0.5%	86
Cement Fiber Board	0.2%	0.3%	30
Single-ply Roofing Membranes	0.3%	0.5%	46
Ceiling Tiles	0.1%	0.1%	12
Other Construction	3.2%	1.2%	483
Hazardous	**10.9%**		**1,637**
Dried Latex Paint	0.0%	0.1%	6
Liquid Latex Paint	0.1%	0.1%	12
Solvent-based Adhesives	0.0%	0.1%	5
Water-based Adhesives	0.0%	0.0%	0
Oil-based Paint/Thinners	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	0
Pesticides/Herbicides	0.0%	0.0%	4
Rechargeable Batteries	0.0%	0.0%	0
Other Dry-cell Batteries	0.0%	0.0%	1
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	3
Motor Oil/Diesel Oil	0.2%	0.0%	32
Asbestos	0.0%	0.0%	0
Explosives	0.0%	0.0%	7
Medical Wastes	10.4%	11.7%	1,559
Other Cleaners/Chemicals	0.0%	0.1%	7
Other Potentially Harmful Waste	0.0%	0.0%	0
Fines and Misc Materials	**0.9%**		**138**
Sand/Soil/Dirt	0.3%	0.3%	51
Non-distinct Fines	0.2%	0.2%	26
Miscellaneous Organics	0.1%	0.1%	19
Miscellaneous Inorganics	0.3%	0.4%	42
Totals	**100%**		**15,004**
Sample Count	77		

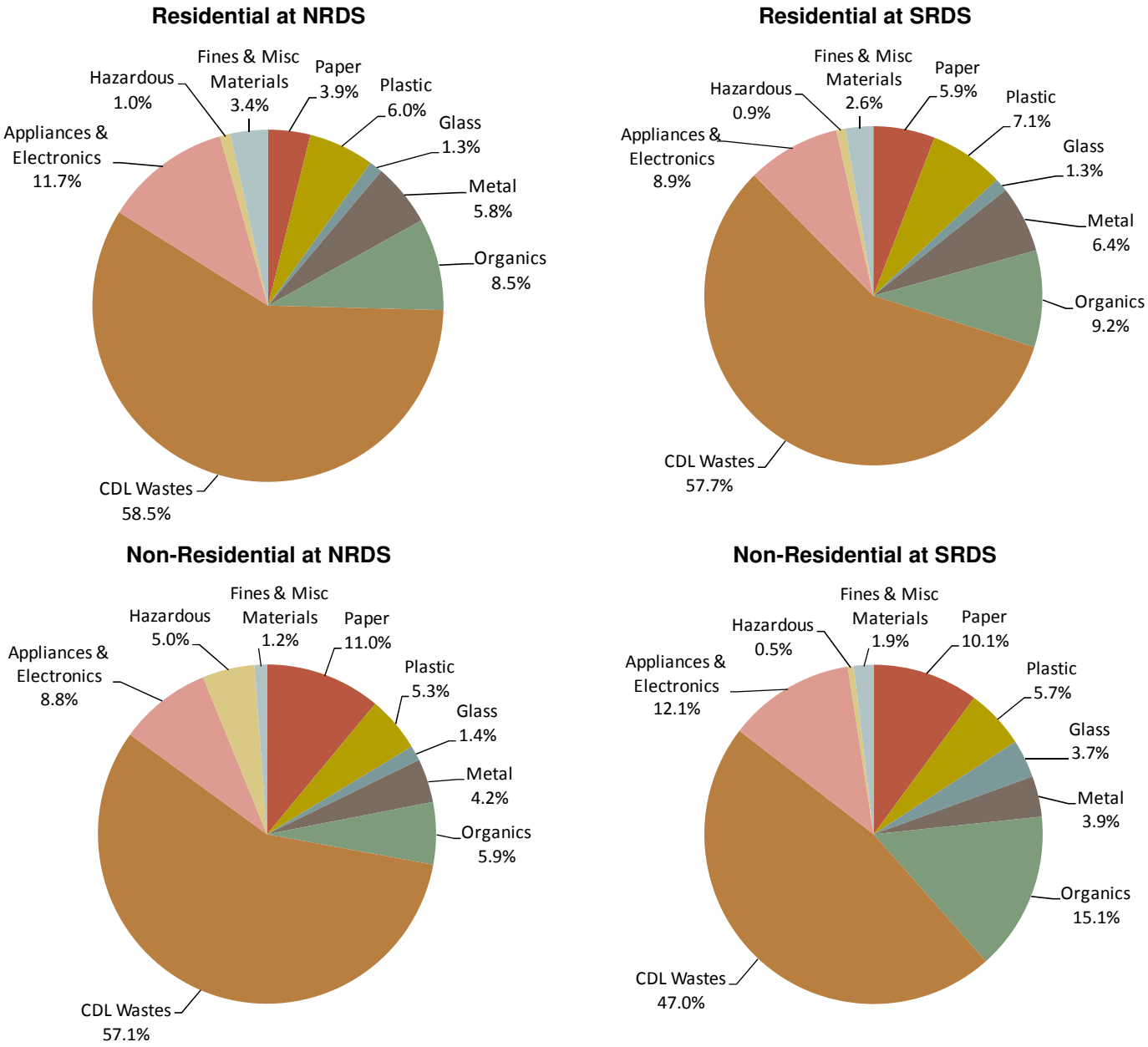
Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

6.4 Self-haul Composition by Generator Type, by Site

This section provides a brief overview of the wastes self-hauled by residential and non-residential generators to the NRDS and SRDS.

As shown in Figure 6-4, **CDL wastes** accounted for over 47% of the total for residential and non-residential waste at both the NRDS and the SRDS. **CDL wastes** include components such as *clean dimensional lumber*, *new painted wood*, and *demo gypsum scrap*.

Figure 6-4. Self-haul Composition Summary: by Generator Type, by Site
(January – December 2012)



6.4.1 Residential Generators, by Site

6.4.1.1 North Recycling and Disposal Station (NRDS)

A total of 77 samples were taken from residential loads at the NRDS. As shown in Table 6-19, the top ten components from these loads summed to more than 57% of the total, and *furniture* was the most prevalent component at about 9% of the tonnage. Table 6-23 lists detailed composition results for the residential waste disposed at the NRDS.

Table 6-19. Top Ten Components: Self-haul Residential at NRDS
(January – December 2012)

Material	Est. Percent	Cum. Percent
Furniture	9.3%	9.3%
Clean Dimension Lumber	7.5%	16.7%
Contaminated Wood	6.3%	23.0%
Carpet	6.2%	29.2%
Other Construction	6.0%	35.2%
Concrete	5.6%	40.8%
New Painted Wood	5.4%	46.2%
Demo Gypsum Scrap	4.4%	50.6%
Clean Engineered Wood	3.5%	54.1%
Other Aggregates	3.3%	57.4%
Total	**57.4%**	

6.4.1.2 South Recycling and Disposal Station (SRDS)

A total of 84 samples were taken from residential loads at the SRDS. As Table 6-20 details, the top ten components in the loads were 54% of the total materials in the loads, by weight. *Carpet*, *clean dimensional lumber*, and *new painted wood* each accounted for approximately 7% of the total. Table 6-24 lists detailed composition results for the residential waste disposed at the SRDS.

Table 6-20. Top Ten Components: Self-haul Residential at SRDS
(January – December 2012)

Material	Est. Percent	Cum. Percent
Carpet	7.1%	7.1%
Clean Dimension Lumber	6.8%	13.9%
New Painted Wood	6.7%	20.6%
Other Construction	6.1%	26.6%
Furniture	5.8%	32.4%
Clean Engineered Wood	4.8%	37.2%
Contaminated Wood	4.8%	42.0%
Demo Gypsum Scrap	4.2%	46.3%
Mixed Metals/Material	4.2%	50.5%
Other Treated Wood	3.5%	54.0%
Total	**54.0%**	

6.4.2 Non-Residential Generators, by Site

6.4.2.1 North Recycling and Disposal Station (NRDS)

A total of 38 samples were taken from non-residential loads at the NRDS. Table 6-21 lists the top ten components in the loads, which sum to about 61% of the total. *Clean dimensional lumber* accounted for approximately 10% of the total, by weight. Table 6-25 lists detailed composition results for the non-residential waste disposed at the NRDS.

Table 6-21. Top Ten Components: Self-haul Non-residential at NRDS
(January – December 2012)

Material	Est. Percent	Cum. Percent
Clean Dimension Lumber	9.5%	9.5%
Furniture	8.4%	17.9%
Demo Gypsum Scrap	7.7%	25.6%
Concrete	6.8%	32.4%
New Painted Wood	6.3%	38.7%
Other Construction	5.6%	44.3%
Medical Wastes	4.9%	49.2%
Other Treated Wood	4.5%	53.7%
Clean Engineered Wood	4.0%	57.7%
Food	3.5%	61.1%
Total	**61.1%**	

6.4.2.2 South Recycling and Disposal Station (SRDS)

A total of 24 samples were taken from non-residential loads at the SRDS. As shown in Table 6-22, the top ten components accounted for a combined total of 61% of the tonnage. *Furniture* was the single largest component of this waste. Table 6-26 lists detailed composition results for the non-residential waste disposed at the SRDS.

Table 6-22. Top Ten Components: Self-haul Non-residential at SRDS
(January – December 2012)

Material	Est. Percent	Cum. Percent
Furniture	10.5%	10.5%
Food	9.5%	20.1%
Contaminated Wood	7.0%	27.1%
Demo Gypsum Scrap	7.0%	34.1%
New Painted Wood	6.7%	40.8%
Other Treated Wood	5.0%	45.8%
Leaves and Grass	4.8%	50.6%
Other Construction	3.9%	54.5%
Pallets	3.4%	57.9%
Plain OCC/Kraft	3.1%	61.0%
Total	**61.0%**	

6.4.3 Comparisons among Generator Types and Sites

Furniture, new painted wood, *demo gypsum scrap,* and *other construction debris* were top ten components for both residential and non-residential generators at both sites. Materials particular

to the top ten components for only one group include *other aggregates* for self-haul residential at NRDS as well as *medical wastes* for self-haul non-residential at NRDSAt SRDS unique materials included *mixed metals/material* for self-haul residential and *leaves and grass* for self-haul non-residential.

Table 6-23. Composition by Weight: Self-haul Residential at NRDS
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**3.9%**	
Newspaper	0.5%	0.6%
Plain OCC/Kraft	1.1%	0.6%
Waxed OCC	0.0%	0.0%
Grocery/Shopping Bags	0.0%	0.0%
High-grade Paper	0.2%	0.2%
Mixed Low-grade Paper	1.3%	0.8%
Polycoated Containers	0.0%	0.0%
Compostable/Soiled	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.0%	0.0%
Mixed/Other Paper	0.8%	0.6%
Plastic	**6.0%**	
#1 PET Bottles	0.0%	0.0%
#2 HDPE Natural Bottles	0.0%	0.1%
#2 HDPE Colored Bottles	0.0%	0.0%
Other Bottles	0.0%	0.0%
Tubs	0.2%	0.2%
Expanded Poly. Non-food	0.1%	0.0%
Expanded Poly. Food-grade	0.0%	0.0%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.0%	0.0%
Other Rigid Packaging	0.1%	0.1%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.0%	0.0%
Clean Polyethylene Film	0.0%	0.0%
Other Film	0.7%	0.3%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.4%	0.4%
Durable Plastic Products	2.2%	0.7%
Plastic/Other Materials	2.1%	0.9%
Glass	**1.3%**	
Clear Bottles	0.1%	0.1%
Green Bottles	0.0%	0.0%
Brown Bottles	0.0%	0.0%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.1%	0.1%
Automotive Glass	0.0%	0.0%
Other Glass	1.0%	0.7%
Metal	**5.8%**	
Aluminum Beverage Cans	0.0%	0.0%
Aluminum Foil/Containers	0.0%	0.0%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.5%	0.4%
Steel Food Cans	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%
Other Ferrous	2.7%	1.2%
Oil filters	0.0%	0.0%
Mixed Metals/Material	2.5%	1.1%
Organics	**8.5%**	
Leaves and Grass	2.1%	1.9%
Prunings	0.1%	0.1%
Food	0.6%	0.5%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	1.4%	0.9%
Mixed Textiles	1.9%	1.4%
Disposable Diapers	0.1%	0.2%
Animal By-products	0.7%	0.6%
Rubber Products	1.5%	1.8%
Tires	0.0%	0.0%

Material	Est. Percent	+ / -
Appliances and Electronics	**11.7%**	
Furniture	9.3%	3.4%
Mattresses	1.1%	0.9%
Small Appliances	0.4%	0.3%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.3%	0.2%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.6%	0.4%
CDL Wastes	**58.5%**	
Clean Dimension Lumber	7.5%	2.8%
Clean Engineered Wood	3.5%	1.7%
Pallets	0.7%	0.8%
Crates	0.0%	0.0%
Other Untreated Wood	1.1%	1.6%
New Painted Wood	5.4%	2.5%
Old Painted Wood	2.2%	1.4%
Creosote-treated Wood	0.0%	0.0%
Other Treated Wood	2.6%	1.4%
Contaminated Wood	6.3%	2.8%
New Gypsum Scrap	0.0%	0.0%
Demo Gypsum Scrap	4.4%	3.3%
Carpet	6.2%	2.7%
Felt Carpet Pad	0.7%	0.7%
Fiberglass Insulation	0.3%	0.5%
Concrete	5.6%	2.9%
Asphalt Paving	0.0%	0.0%
Other Aggregates	3.3%	2.1%
Rock	0.2%	0.3%
Asphalt Shingles	0.1%	0.2%
Other Asphaltic Roofing	0.5%	0.4%
Ceramics	2.0%	1.4%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	6.0%	2.5%
Hazardous	**1.0%**	
Dried Latex Paint	0.1%	0.1%
Liquid Latex Paint	0.0%	0.0%
Solvent-based Adhesives	0.1%	0.2%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.1%	0.1%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	0.1%	0.1%
Other Cleaners/Chemicals	0.5%	0.7%
Other Potentially Harmful Waste	0.1%	0.1%
Fines and Misc Materials	**3.4%**	
Sand/Soil/Dirt	3.2%	3.0%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	0.2%	0.1%
Miscellaneous Inorganics	0.1%	0.1%
Totals	**100%**	
Sample Count	77	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 6-24. Composition by Weight: Self-haul Residential at SRDS
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**5.9%**	
Newspaper	0.3%	0.4%
Plain OCC/Kraft	2.2%	0.9%
Waxed OCC	0.0%	0.0%
Grocery/Shopping Bags	0.0%	0.0%
High-grade Paper	0.4%	0.4%
Mixed Low-grade Paper	1.5%	0.8%
Polycoated Containers	0.0%	0.0%
Compostable/Soiled	0.5%	0.3%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.1%	0.1%
Mixed/Other Paper	0.8%	0.4%
Plastic	**7.1%**	
#1 PET Bottles	0.0%	0.0%
#2 HDPE Natural Bottles	0.0%	0.0%
#2 HDPE Colored Bottles	0.0%	0.0%
Other Bottles	0.0%	0.0%
Tubs	0.3%	0.2%
Expanded Poly. Non-food	0.2%	0.1%
Expanded Poly. Food-grade	0.0%	0.0%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.1%	0.0%
Other Rigid Packaging	0.1%	0.0%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.0%	0.1%
Clean Polyethylene Film	0.0%	0.0%
Other Film	0.9%	0.4%
Plastic Pipe	0.1%	0.1%
Foam Carpet Padding	0.9%	0.7%
Durable Plastic Products	2.6%	0.8%
Plastic/Other Materials	1.8%	0.8%
Glass	**1.3%**	
Clear Bottles	0.1%	0.1%
Green Bottles	0.0%	0.0%
Brown Bottles	0.0%	0.0%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.2%	0.2%
Automotive Glass	0.0%	0.0%
Other Glass	1.0%	0.9%
Metal	**6.4%**	
Aluminum Beverage Cans	0.0%	0.0%
Aluminum Foil/Containers	0.0%	0.0%
Other Aluminum	0.1%	0.1%
Other Nonferrous	0.0%	0.1%
Steel Food Cans	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%
Other Ferrous	1.9%	0.8%
Oil filters	0.0%	0.0%
Mixed Metals/Material	4.2%	1.8%
Organics	**9.2%**	
Leaves and Grass	3.3%	1.7%
Prunings	0.0%	0.1%
Food	2.0%	1.3%
Fats, Oils, Grease	0.0%	0.0%
Textiles/Clothing	1.2%	0.7%
Mixed Textiles	0.9%	0.5%
Disposable Diapers	0.1%	0.1%
Animal By-products	0.1%	0.1%
Rubber Products	1.0%	1.1%
Tires	0.6%	0.7%

Material	Est. Percent	+ / -
Appliances and Electronics	**8.9%**	
Furniture	5.8%	2.6%
Mattresses	2.3%	1.6%
Small Appliances	0.4%	0.4%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.2%	0.1%
CRT Monitors	0.1%	0.1%
CRT Televisions	0.0%	0.0%
Other Electronics	0.2%	0.2%
CDL Wastes	**57.7%**	
Clean Dimension Lumber	6.8%	2.4%
Clean Engineered Wood	4.8%	2.4%
Pallets	1.1%	0.9%
Crates	0.1%	0.2%
Other Untreated Wood	0.4%	0.4%
New Painted Wood	6.7%	2.4%
Old Painted Wood	2.4%	1.9%
Creosote-treated Wood	0.1%	0.2%
Other Treated Wood	3.5%	1.5%
Contaminated Wood	4.8%	1.9%
New Gypsum Scrap	1.1%	1.2%
Demo Gypsum Scrap	4.2%	2.6%
Carpet	7.1%	2.9%
Felt Carpet Pad	0.7%	0.7%
Fiberglass Insulation	0.6%	0.6%
Concrete	2.4%	1.3%
Asphalt Paving	0.0%	0.0%
Other Aggregates	2.1%	1.8%
Rock	0.1%	0.1%
Asphalt Shingles	0.7%	0.8%
Other Asphaltic Roofing	0.0%	0.0%
Ceramics	0.8%	0.8%
Cement Fiber Board	0.4%	0.5%
Single-ply Roofing Membranes	0.5%	0.8%
Ceiling Tiles	0.1%	0.2%
Other Construction	6.1%	2.0%
Hazardous	**0.9%**	
Dried Latex Paint	0.1%	0.1%
Liquid Latex Paint	0.2%	0.2%
Solvent-based Adhesives	0.1%	0.1%
Water-based Adhesives	0.1%	0.2%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.1%	0.1%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.0%	0.0%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	0.0%	0.0%
Other Cleaners/Chemicals	0.2%	0.3%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**2.6%**	
Sand/Soil/Dirt	2.2%	1.4%
Non-distinct Fines	0.1%	0.2%
Miscellaneous Organics	0.3%	0.2%
Miscellaneous Inorganics	0.1%	0.1%
Totals	**100%**	
Sample Count	84	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 6-25. Composition by Weight: Self-haul Non-Residential at NRDS
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**11.0%**	
Newspaper	0.1%	0.1%
Plain OCC/Kraft	1.5%	0.9%
Waxed OCC	0.0%	0.0%
Grocery/Shopping Bags	0.1%	0.1%
High-grade Paper	0.6%	0.7%
Mixed Low-grade Paper	3.1%	1.8%
Polycoated Containers	0.2%	0.2%
Compostable/Soiled	2.2%	1.7%
Pot. Comp. Single-use Food Service	0.3%	0.4%
Non-Comp. Single-use Food Service	0.9%	0.8%
Mixed/Other Paper	2.1%	1.1%
Plastic	**5.3%**	
#1 PET Bottles	0.4%	0.2%
#2 HDPE Natural Bottles	0.2%	0.1%
#2 HDPE Colored Bottles	0.0%	0.0%
Other Bottles	0.0%	0.0%
Tubs	0.3%	0.2%
Expanded Poly. Non-food	0.0%	0.0%
Expanded Poly. Food-grade	0.0%	0.0%
Rigid Poly. Foam Insulation	0.0%	0.1%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.3%	0.2%
Other Rigid Packaging	0.3%	0.2%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.4%	0.4%
Clean Polyethylene Film	0.0%	0.0%
Other Film	1.5%	0.8%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	0.1%	0.1%
Durable Plastic Products	1.1%	0.8%
Plastic/Other Materials	0.5%	0.4%
Glass	**1.4%**	
Clear Bottles	0.2%	0.2%
Green Bottles	0.1%	0.1%
Brown Bottles	0.1%	0.1%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	1.0%	1.6%
Automotive Glass	0.0%	0.0%
Other Glass	0.2%	0.2%
Metal	**4.2%**	
Aluminum Beverage Cans	0.0%	0.0%
Aluminum Foil/Containers	0.0%	0.0%
Other Aluminum	0.0%	0.0%
Other Nonferrous	0.3%	0.3%
Steel Food Cans	0.0%	0.0%
Empty Aerosol Cans	0.0%	0.0%
Other Ferrous	1.6%	1.3%
Oil filters	0.0%	0.0%
Mixed Metals/Material	2.1%	1.6%
Organics	**5.9%**	
Leaves and Grass	0.6%	0.8%
Prunings	0.0%	0.0%
Food	3.5%	2.4%
Fats, Oils, Grease	0.1%	0.2%
Textiles/Clothing	0.6%	0.5%
Mixed Textiles	0.7%	0.7%
Disposable Diapers	0.0%	0.0%
Animal By-products	0.1%	0.2%
Rubber Products	0.3%	0.2%
Tires	0.0%	0.1%

Material	Est. Percent	+ / -
Appliances and Electronics	**8.8%**	
Furniture	8.4%	5.2%
Mattresses	0.1%	0.1%
Small Appliances	0.1%	0.2%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.2%	0.3%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.0%	0.0%
Other Electronics	0.1%	0.1%
CDL Wastes	**57.1%**	
Clean Dimension Lumber	9.5%	5.5%
Clean Engineered Wood	4.0%	2.7%
Pallets	2.0%	2.3%
Crates	0.5%	0.7%
Other Untreated Wood	0.2%	0.3%
New Painted Wood	6.3%	4.4%
Old Painted Wood	1.4%	1.6%
Creosote-treated Wood	1.1%	1.8%
Other Treated Wood	4.5%	3.8%
Contaminated Wood	0.7%	1.0%
New Gypsum Scrap	0.2%	0.3%
Demo Gypsum Scrap	7.7%	6.7%
Carpet	0.9%	0.9%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.5%	0.8%
Concrete	6.8%	6.5%
Asphalt Paving	0.1%	0.2%
Other Aggregates	1.9%	1.9%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.0%	0.1%
Ceramics	3.1%	5.0%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	5.6%	3.4%
Hazardous	**5.0%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.0%	0.0%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.1%	0.1%
Asbestos	0.0%	0.0%
Explosives	0.0%	0.0%
Medical Wastes	4.9%	4.7%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**1.2%**	
Sand/Soil/Dirt	0.1%	0.1%
Non-distinct Fines	0.0%	0.1%
Miscellaneous Organics	0.9%	1.3%
Miscellaneous Inorganics	0.1%	0.2%
Totals	**100%**	
Sample Count	38	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 6-26. Composition by Weight: Self-haul Non-Residential at SRDS
(January – December 2012)

Material	Est. Percent	+ / -
Paper	**10.1%**	
Newspaper	0.2%	0.3%
Plain OCC/Kraft	3.1%	2.3%
Waxed OCC	2.8%	3.7%
Grocery/Shopping Bags	0.0%	0.0%
High-grade Paper	0.5%	0.5%
Mixed Low-grade Paper	1.2%	1.1%
Polycoated Containers	0.0%	0.1%
Compostable/Soiled	0.3%	0.4%
Pot. Comp. Single-use Food Service	0.2%	0.3%
Non-Comp. Single-use Food Service	0.3%	0.3%
Mixed/Other Paper	1.5%	1.9%
Plastic	**5.7%**	
#1 PET Bottles	0.2%	0.2%
#2 HDPE Natural Bottles	0.0%	0.0%
#2 HDPE Colored Bottles	0.1%	0.1%
Other Bottles	0.0%	0.0%
Tubs	0.1%	0.1%
Expanded Poly. Non-food	0.2%	0.3%
Expanded Poly. Food-grade	0.0%	0.0%
Rigid Poly. Foam Insulation	0.0%	0.0%
Pot. Comp. Single-use Food Service	0.0%	0.0%
Non-Comp. Single-use Food Service	0.1%	0.1%
Other Rigid Packaging	0.0%	0.0%
Shopping/Dry Cleaning Bags	0.0%	0.0%
Stretch Wrap	0.0%	0.0%
Clean Polyethylene Film	0.0%	0.0%
Other Film	0.7%	0.5%
Plastic Pipe	0.0%	0.0%
Foam Carpet Padding	1.4%	2.1%
Durable Plastic Products	1.8%	2.0%
Plastic/Other Materials	1.0%	1.0%
Glass	**3.7%**	
Clear Bottles	1.3%	2.1%
Green Bottles	0.0%	0.0%
Brown Bottles	2.1%	3.4%
Container Glass	0.0%	0.0%
Fluorescent Tubes	0.0%	0.0%
CFLs	0.0%	0.0%
Flat Glass	0.2%	0.3%
Automotive Glass	0.0%	0.0%
Other Glass	0.0%	0.0%
Metal	**3.9%**	
Aluminum Beverage Cans	0.0%	0.1%
Aluminum Foil/Containers	0.0%	0.0%
Other Aluminum	0.0%	0.1%
Other Nonferrous	0.2%	0.3%
Steel Food Cans	0.0%	0.1%
Empty Aerosol Cans	0.0%	0.0%
Other Ferrous	0.8%	0.6%
Oil filters	0.0%	0.0%
Mixed Metals/Material	2.7%	2.9%
Organics	**15.1%**	
Leaves and Grass	4.8%	7.8%
Prunings	0.0%	0.0%
Food	9.5%	8.1%
Fats, Oils, Grease	0.1%	0.2%
Textiles/Clothing	0.1%	0.1%
Mixed Textiles	0.2%	0.2%
Disposable Diapers	0.1%	0.1%
Animal By-products	0.0%	0.1%
Rubber Products	0.1%	0.1%
Tires	0.1%	0.2%

+ / -	Est. Percent	+ / -
Appliances and Electronics	**12.1%**	
Furniture	10.5%	7.6%
Mattresses	0.3%	0.4%
Small Appliances	0.1%	0.2%
Cell Phones	0.0%	0.0%
Audio/Visual Equipment	0.6%	0.6%
CRT Monitors	0.0%	0.0%
CRT Televisions	0.1%	0.2%
Other Electronics	0.4%	0.6%
CDL Wastes	**47.0%**	
Clean Dimension Lumber	2.9%	3.0%
Clean Engineered Wood	1.7%	1.8%
Pallets	3.4%	5.5%
Crates	0.2%	0.4%
Other Untreated Wood	1.3%	2.2%
New Painted Wood	6.7%	4.5%
Old Painted Wood	0.0%	0.0%
Creosote-treated Wood	1.2%	1.8%
Other Treated Wood	5.0%	6.0%
Contaminated Wood	7.0%	4.1%
New Gypsum Scrap	0.6%	0.9%
Demo Gypsum Scrap	7.0%	7.4%
Carpet	2.6%	2.2%
Felt Carpet Pad	0.0%	0.0%
Fiberglass Insulation	0.6%	1.0%
Concrete	2.1%	2.9%
Asphalt Paving	0.0%	0.0%
Other Aggregates	0.2%	0.3%
Rock	0.0%	0.0%
Asphalt Shingles	0.0%	0.0%
Other Asphaltic Roofing	0.3%	0.5%
Ceramics	0.2%	0.3%
Cement Fiber Board	0.0%	0.0%
Single-ply Roofing Membranes	0.0%	0.0%
Ceiling Tiles	0.0%	0.0%
Other Construction	3.9%	4.0%
Hazardous	**0.5%**	
Dried Latex Paint	0.0%	0.0%
Liquid Latex Paint	0.1%	0.2%
Solvent-based Adhesives	0.0%	0.0%
Water-based Adhesives	0.0%	0.0%
Oil-based Paint/Thinners	0.0%	0.0%
Caustic Cleaners	0.0%	0.0%
Pesticides/Herbicides	0.0%	0.0%
Rechargeable Batteries	0.0%	0.0%
Other Dry-cell Batteries	0.0%	0.0%
Wet-cell Batteries	0.0%	0.0%
Gasoline/Kerosene	0.0%	0.0%
Motor Oil/Diesel Oil	0.2%	0.4%
Asbestos	0.1%	0.2%
Explosives	0.0%	0.0%
Medical Wastes	0.0%	0.0%
Other Cleaners/Chemicals	0.0%	0.0%
Other Potentially Harmful Waste	0.0%	0.0%
Fines and Misc Materials	**1.9%**	
Sand/Soil/Dirt	0.7%	1.1%
Non-distinct Fines	0.0%	0.0%
Miscellaneous Organics	1.2%	1.9%
Miscellaneous Inorganics	0.0%	0.0%
Totals	**100%**	
Sample Count	24	

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

A Waste Component Categories

Waste samples were sorted by hand into 113 waste components, which are grouped into ten broad categories. The waste categories in the 2012 study are based on those used in Seattle's 2010 residential waste study.

Medical wastes were excluded from sorting; virtually everything else was weighed and recorded. A list of component categories and definitions follows.

Waste Components

PAPER

1. *NEWSPAPER*: Printed ground wood newsprint. Includes advertising "slicks" (glossy paper), if found mixed with newspaper; otherwise, ad slicks are included with mixed low grade.

2. *PLAIN OCC/KRAFT PAPER*: Old unwaxed/uncoated corrugated container boxes and Kraft paper.

3. *WAXED OCC*: Old waxed/coated corrugated container boxes and Kraft paper.

4. *GROCERY/SHOPPING BAGS:* Paper grocery and shopping bags. Includes all brown paper bags and bags with non-paper handles.

5. *HIGH-GRADE PAPER*: White and lightly colored bond, rag, or stationary grade paper. This includes white or lightly colored sulfite/sulfate bond, copy papers, notebook paper, envelopes, continuous-feed sulfite/sulfate computer printouts and forms of all types, excluding carbonless paper.

6. *MIXED LOW-GRADE PAPER*: Mixed paper acceptable in Seattle's residential curbside program. This includes junk mail; magazines; colored papers; bleached Kraft; boxboard; mailing tubes; carbonless copy paper; ground wood computer printouts; paperback books; telephone directories; spiral notebooks; and frozen/refrigerator packaging. Excludes juice concentrate cans.

7. POLYCOATED CONTAINERS: Polycoated milk, ice cream, and aseptic juice containers, including those with plastic spouts attached.

8. *COMPOSTABLE/SOILED PAPER*: Paper towels, waxed paper, tissues, and other papers that were soiled with food during use (e.g., pizza box inserts).

9. *POTENTIALLY COMPOSTABLE SINGLE-USE FOOD SERVICE PAPER:* Paper plates, bowls, and cups, including wax-coated paper plates, bowls and cups and items labeled "compostable." Excludes items with visible plastic coating or lining.

10. *NON-COMPOSTABLE SINGLE-USE FOOD SERVICE PAPER*: Paper plates, bowls, and cups not labeled "compostable" and that appear to have a plastic lining or coating.

11. *MIXED/OTHER PAPER*: Predominantly paper with other materials attached (e.g. orange juice cans), and other non-recyclable papers such as carbon copy paper, hardcover books, and photographs.

PLASTIC

12. *PET BOTTLES*: Blow-molded polyethylene terephthalate (#1) bottles and jars excluding toxic product containers.

13. *HDPE NATURAL BOTTLES*: Blow-molded high-density translucent polyethylene (#2) bottles and jars excluding toxic product containers. Examples include milk, juice, beverage, oil, vinegar, and distilled water.

14. *HDPE COLORED BOTTLES*: Blow-molded high-density colored polyethylene (#2) bottles and jars excluding toxic product containers. Examples include liquid detergent bottles and some hair care bottles.

15. *OTHER PLASTIC BOTTLES*: Blow-molded #3-#7 plastic bottles and jars and unknown bottles. Excludes toxic product containers.

16. *TUBS:* #1-#7 tubs such as yogurt, cottage cheese, prescription vials, and margarine. Excludes toxic product containers.

17. *EXPANDED POLYSTYRENE NON-FOOD GRADE:* Includes non-food packaging and finished products made of expanded polystyrene. Excludes Styrofoam products such as cups, plates, and bowls and rigid foam insulation.

18. *EXPANDED POLYSTYRENE FOOD-GRADE:* "Styrofoam" products used to contain food such as "clamshells," cups, plates, and bowls.

19. *RIGID POLYSTYRENE FOAM INSULATION*: rigid panels of expanded polystyrene used to insulate walls and roofs. Excludes non-polystyrene rigid foam insulation.

20. *POTENTIALLY COMPOSTABLE SINGLE-USE FOOD SERVICE PLASTICS:* Includes clamshells, cups, cup lids, and salad trays labeled “compostable.” Excludes clamshells, cups plates and bowls and other food service items made of Styrofoam.

21. *NON-COMPOSTABLE SINGLE-USE FOOD SERVICE PLASTICS:* Includes forks and spoons, clamshells, cups, cup lids, and salad trays not labeled “compostable.” Excludes clamshells, cups plates and bowls and other food service items made of Styrofoam.

22. *OTHER RIGID PACKAGING*: #1-#7 and unmarked rigid plastic packaging (excluding expanded polystyrene -- Styrofoam), such as cookie tray inserts, plastic spools, plastic frozen food trays, plastic toothpaste tubes, and disposable plant pots. Also includes toxic product containers, such as for motor oil or antifreeze.

23. *CLEAN SHOPPING/DRY CLEANER BAGS*: Labeled grocery and merchandise, dry cleaner, and newspaper polyethylene film bags that were not contaminated with food, liquid or grit during use.

24. *STRETCH WRAP:* Polyethylene pallet wrap or stretch wrap.

25. *OTHER CLEAN POLYETHYLENE FILM*: Polyethylene film and bags, other than those identified above, which were not contaminated with food, liquid, or grit during use. Includes clean plastic sheeting, clean trash bags, and mattress packaging.

26. *OTHER FILM*: Film packaging not defined above, or: was contaminated with food, liquid or grit during use; is woven together (e.g., grain bags); or that contains multiple layers of film or other materials that have been fused together (e.g., potato chip bags). This category also includes contaminated plastic sheeting, photographic negatives, shower curtains, any bags used to contain food or liquid (e.g., produce), contaminated trash bags, used garbage bags, and shopping bags used as garbage bags.

27. *PLASTIC PIPE*: pipes and fittings made of PVC (polyvinyl chloride), ABS (acrylonitrile butadiene styrene), or other rigid plastics.

28. *FOAM CARPET PADDING:* foam material used under carpet to provide insulation and padding. Most commonly made of urethane foam. Can be solid-colored or have a marbled appearance.

29. *DURABLE PLASTIC PRODUCTS*: Finished plastic products made entirely of plastic such as toys, toothbrushes, vinyl hose, plastic lawn furniture, and foam mattresses. Includes fiberglass resin products and materials, and durable plastic pots.

30. *PLASTIC/OTHER MATERIALS*: Items that are predominately plastic with other materials attached such as disposable razors, pens, lighters, toys, and 3-ring binders.

GLASS

31. *CLEAR BEVERAGE*: Bottles that are clear in color, including pop, liquor, wine, juice, beer, and vinegar bottles.

32. *GREEN BEVERAGE*: Bottles that are green in color, including green pop, liquor, wine, beer, and lemon juice bottles.

33. *BROWN BEVERAGE*: Bottles that are brown in color, including brown pop, beer, liquor, juice, and extract bottles.

34. *CONTAINER GLASS*: Glass containers of all colors, holding solid materials such as mayonnaise, non-dairy creamer, and facial cream.

35. *FLUORESCENT TUBES*: Fluorescent light tubes.

36. *COMPACT FLUORESCENT LIGHTS (CFL):* small, fluorescent bulbs similar in appearance to incandescent bulbs. These bulbs typically have a spiral or tubular design.

37. *FLAT GLASS:* Clear or tinted glass that is flat. Examples include glass window panes, doors and table tops, safety glass, and architectural glass. Excludes windshields, laminated glass, or any curved glass.

38. *AUTOMOTIVE GLASS:* Windshield and side window auto glass.

39. *OTHER GLASS:* Mirrors, light bulbs (except fluorescent tubes), glassware, and blue glass bottles.

METAL

40. *ALUMINUM CANS*: Aluminum beverage cans (UBC) and bi-metal cans made mostly of aluminum.

41. *ALUMINUM FOIL/CONTAINERS*: Aluminum food containers, trays, and foil.

42. *OTHER ALUMINUM*: Aluminum products and scrap such as window frames, cookware.

43. *OTHER NONFERROUS*: Metals not derived from iron, to which a magnet will not adhere, and which are not significantly contaminated with other metals or materials.

44. *STEEL FOOD CANS*: Steel food containers, including bi-metal cans made mostly of steel.

45. *EMPTY AEROSOL CANS:* Empty, mixed material/metal aerosol cans. (Aerosols that still contain product are sorted according to that material—for instance, solvent-based paint.)

46. *OTHER FERROUS*: Ferrous and alloyed ferrous scrap metals to which a magnet adheres and which are not significantly contaminated with other metals or materials.

47. *OIL FILTERS:* Metal oil filters used in cars and other automobiles.

48. *MIXED METALS/MATERIALS*: Items that are predominately metal with other materials attached such as motors, insulated wire, and finished products containing a mixture of metals, or metals and other materials. White goods are banned from Seattle's disposal. However, segments of large appliances are occasionally found; they are included in this category.

COMPOSTABLE ORGANICS

49. *LEAVES AND GRASS*: Non-woody plant materials from a yard or garden area, including grass clippings, leaves, weeds, and garden wastes.

50. *PRUNINGS*: Cut prunings, 6" or less in diameter, from bushes, shrubs, and trees.

51. *FOOD*: Food wastes and scraps, including bone, rinds, etc. Excludes the weight of food containers, except when container weight is not appreciable compared to the food inside. Biodegradable packaging peanuts (made from corn starch) are also included in this category. Excludes fats, oils, and grease.

52. *FATS, OILS, AND GREASE:* fatty by-products of food preparation. Includes cooking oil, butter, lard, and gravy. Can be in liquid or solid form.

OTHER ORGANICS

53. *TEXTILES*: Rag stock fabric materials including natural and synthetic textiles such as cotton, wool, silk, woven nylon, rayon, and polyester.

54. *MIXED TEXTILES:* Non-rag stock grade textiles such as upholstered items, non-leather shoes and handbags, heavy linens, and draperies.

55. *DISPOSABLE DIAPERS:* Diapers made from a combination of fibers, synthetic, and/or natural, and made for the purpose of single use. This includes disposable baby diapers and adult protective undergarments.

56. *ANIMAL BY-PRODUCTS*: Animal carcasses not resulting from food storage or preparation, animal wastes, and kitty litter.

57. *RUBBER PRODUCTS*: Finished products and scrap materials made of natural and synthetic rubber, such as bath mats, inner tubes, rubber hoses, rubber carpet padding, and foam rubber.

58. *TIRES*: Vehicle tires of all types. Tubes are put into the rubber category.

FURNITURE, APPLIANCES, AND ELECTRONICS

59. *FURNITURE*: Mixed-material furniture such as upholstered chairs. Furniture that is made purely of one material, such as plastic or metal, would be categorized according to that material (e.g., plastic products or other ferrous metal).

60. *MATTRESSES*: Mattresses and box springs.

61. *SMALL APPLIANCES*: Small electric appliances such as toasters, microwave ovens, power tools, curling irons, and light fixtures.

62. *CELL PHONES:* Personal digital assistants (PDA) and cell phones.

63. *AUDIO/VISUAL EQUIPMENT*: Examples include stereos, radios, tape decks, VCRs, camcorders, and digital cameras.

64. *COMPUTER MONITORS:* Computer monitors containing a cathode ray tube (CRT).

65. *TELEVISIONS:* Television sets containing a cathode ray tube (CRT).

66. *OTHER ELECTRONICS:* Computer items not containing CRTs such as processors, mice and mouse pads, keyboards, disk drives, laptops, and other video display without cathode ray tubes (CRT).

CONSTRUCTION DEBRIS

67. *CLEAN DIMENSION LUMBER:* Milled lumber commonly used in construction for framing and related uses, including 2 x 4's, 2 x 6's,that is clean (only including trace amounts of paint, nails, and other contaminants)Includes 2 x 4's with painted ends.

68. *CLEAN ENGINEERED WOOD*: Sheets of plywood, strandboard, particleboard, and other wood created using glue that are clean (only including trace amounts of paint, nails, and other contaminants).

69. *PALLETS*: Untreated wood pallets, whole and broken.

70. *CRATES*: Untreated crates, pieces of crates, and other packaging lumber/panelboard.

71. *OTHER UNTREATED WOOD*: Compostable prunings or stumps 6" or greater in diameter.

72. *NEW PAINTED WOOD:* Lumber and wood products from new construction that have been painted so as to render them difficult to compost.

73. *OLD PAINTED WOOD*: Painted wood from demolition jobs. May be flaky and oxidized. Includes lead-based painted wood

74. *CREOSOTE-TREATED WOOD*: Lumber and wood products that have been treated with creosote so as to render them difficult to compost (with generally 50% or more of the surface area treated).

75. *OTHER TREATED WOOD*: Lumber and wood products that have been treated (other than painted or treated with creosote) so as to render them difficult to compost. This includes chemically treated lumber.

76. *CONTAMINATED WOOD:* Predominantly wood and lumber products that are mixed with other materials in such a way that they cannot easily be separated. This includes wood with metal, gypsum, concrete, or other contaminants that would not compost easily.

77. *NEW GYPSUM SCRAP*: Calcium sulfate dehydrate sandwiched between heavy layers of Kraft-type paper. Also known as drywall. This category includes new drywall that has not been painted or treated in other ways. Excludes GP DensGlass (and other brands) of exterior or roof paneling which is gypsum sandwiched between a fiberglass-reinforced coating.

78. *DEMO GYPSUM SCRAP*: Used or demolition gypsum wallboard scrap that has been painted or treated.

79. *CARPET:* General category of flooring applications and non-rag stock textiles consisting of various natural or synthetic fibers bonded to some type of backing material.

80. *FELT CARPET PAD:* Fiber carpet pads made of jute, hair, or synthetic materials, such as recycled carpet fibers. This material may be coated with latex or other resin.

81. *FIBERGLASS INSULATION*: Fiberglass building and mechanical insulation, batt or rigid.

82. *CONCRETE:* A hard material made from sand, gravel, aggregate, cement mix, and water. This category includes concrete containing steel mesh and/or reinforcement bars, or "rebar". Examples include pieces of building foundations, concrete paving, and cinder blocks.

83. *ASPHALT PAVING*: a black or brown, tar-like material mixed with aggregate used as a paving material. This category includes asphalt paving containing steel mesh and/or reinforcement bars, or "rebar."

84. *OTHER AGGREGATES:* Aggregates other than concrete and asphalt paving such as bricks, masonry tile, and clay roofing tiles.

85. *ROCK:* Rock gravel larger than 2" in diameter.

86. *ASPHALT SHINGLES*: Roofing material composed of fiberglass or organic felts saturated with asphalt and covered with inert aggregates as well as attached roofing tar and tar paper. Commonly known as three-tab roofing shingles but including older designs as well.

87. *OTHER ASPHALTIC ROOFING*: Other roofing material made with layers of felt, asphalt, aggregates, and attached roofing tar and tar paper normally used on flat/low pitched roofs usually on commercial buildings. Includes tar and gravel or "built-up roof membranes" as well as other asphaltic roofing membranes.

88. *CERAMICS*: Finished ceramic or porcelain products such as toilets, sinks, and some dishware.

89. *CEMENT FIBER BOARD*: a composite building material containing cement and wood fiber. Includes Hardiplank, Hardiboard, tile backer board, and other similar products.

90. *DRIED LATEX PAINTS:* Water-based paints and similar products that have dried. Excludes empty paint containers and paint that is outweighed by that of the container.

91. *SINGLE-PLY ROOFING MEMBRANES:* Plastic roofing membranes typically installed in gray, white, or black sheets. This category includes thermoplastic membranes, such as PVC or thermoplastic olefin (TPO), or thermoset roofing membranes, such as Ethylene Propylene Diene Monomer (EPDM) or "rubber" roofs.

92. *CEILING TILES*: Fiber or composite acoustic ceiling tiles.

93. *OTHER CONSTRUCTION DEBRIS:* Construction debris (other than wood) that cannot be classified elsewhere and mixed fine building material scraps. For example, floor sweepings from construction activities containing sawdust, nails, wire, etc. Includes GP DensGlass (and other brands) of exterior or roof paneling which is gypsum sandwiched between a fiberglass-reinforced coating.

POTENTIALLY HARMFUL WASTES

94. *LIQUID LATEX PAINTS*: Water-based paints and similar products in liquid form. Excludes empty paint containers and paint that is outweighed by that of the container.

95. *SOLVENT-BASED ADHESIVES/GLUES*: Oil/resin/volatile solvent-based glues and adhesives, including epoxy, rubber cement, two-part glues and sealers, and auto body fillers.

96. *WATER-BASED ADHESIVES/GLUES*: Water-based glues, caulking compounds, grouts, and Spackle.

97. *OIL-BASED PAINT/SOLVENT*: Solvent-based paints, varnishes, and similar products. Various solvents, including chlorinated and flammable solvents, paint strippers, solvents

contaminated with other products such as paints, degreasers and some other cleaners if the primary ingredient is (or was) a solvent, or alcohol such as methanol and isopropanol.

98. *CAUSTIC CLEANERS:* Caustic acids and bases whose primary purpose is to clean surfaces, unclog drains, or perform other actions.

99. *PESTICIDES/HERBICIDES*: Variety of poisons with the purpose of discouraging or killing insects, weeds, or microorganisms. Fungicides and wood preservatives, such as pentachlorophenol, are also included.

100. *RECHARGEABLE BATTERIES:* Rechargeable batteries, such as those found in cordless power tools, cell phones, laptops, digital cameras, toothbrushes, and remote control toys.

101. *OTHER DRY-CELL BATTERIES*: Dry-cell batteries of various sizes and types as commonly used in households. Includes button cell batteries, such as those found in watches and hearing aids.

102. *WET-CELL BATTERIES*: Wet-cell batteries of various sizes and types as commonly used in automobiles.

103. *GASOLINE/KEROSENE*: Gasoline, diesel fuel, and fuel oils.

104. *MOTOR OIL/DIESEL OIL*: Lubricating oils, primarily used in vehicles but including other types with similar characteristics.

105. *ASBESTOS*: Asbestos and asbestos-containing wastes (if this is the primary hazard associated with these wastes).

106. *EXPLOSIVES*: Gunpowder, unspent ammunition, picric acid, and other potentially explosive chemicals.

107. *MEDICAL WASTES*: Materials typically discarded in a health care setting such as I.V. tubing and patient drapes, specimen containers, and Petri dishes. Medical wastes that could be considered a biohazard are weighed, but not further sorted.

108. *OTHER CLEANERS/CHEMICALS*: Soaps, non-caustic cleaners, medicines, cosmetics, and other household chemicals.

109. *OTHER POTENTIALLY HARMFUL WASTES*: Other chemicals or potentially harmful wastes that do not fit into the above categories, including unidentifiable materials.

FINES AND MISCELLANEOUS MATERIALS

110. *SAND/SOIL/DIRT*: Sand, soil, dirt, and gravel smaller than 2" in diameter.

111. *NONDISTINCT FINES:* Mixed MSW fines smaller than 2” in diameter.

112. *MISCELLANEOUS ORGANICS*: Combustible materials including wax; bar soap; cigarette butts; scraps of leather and leather products including shoes and belts;

feminine hygiene products; briquettes; fireplace, burn barrel and fire pit ash; and other organic materials not classified elsewhere.

113. *MISCELLANEOUS INORGANICS*: Other inorganic, non-combustible materials not classified elsewhere.

Changes to Waste Component Categories

The material types used to categorize Seattle's waste stream have been refined over the years. Table A-1 tracks these changes. (An "X" signifies that the component remains the same from the previous study period; an outline border reflects how components were split apart or grouped together.)

Table A-1 Changes to Waste Component Categories, 1988 to present

1988-89	*1990*	*1992*	*1994*	1996	1998/99	2000	2002	2004	2006	2008	2010	2012
PAPER												
Newspaper	x	x	x	x	x	x	x	x	x	x	x	x
Corrugated Paper	x	x	OCC/Kraft	OCC/Kraft,	x	x	x	x	x	x	x	x
Office Paper	x	x	x	x	x	x	x	High Grade Paper	x	x	x	x
Computer Paper	x	x	x	x	x	x	x					
Mixed Scrap Paper	x	x	Mixed Low Grade	x	x	x	x	Mixed Low Grade	Mixed Low-Grade	x	x	Mixed Low Grade
			Phone Books	x	x	x	x					
Other Paper	x	x	Milk/Juice Polycoats	x	x	x	x	Polycoated Paper				Polycoated Containers
			Frozen Food Polycoats	x	x	x	x					
			Compostable/ Soiled	Compostable/ Soiled	x	x	x	x	x	x	x	x
										Single-use Food Service	Potentially Compostable Single-use Food Service	x
											Other Single-Use Food Service	Renamed, "Non-Compostable Single-Use Food Service Paper"
				OCC/Kraft, Waxed	x	x	x	x	x	x	x	Deleted "Kraft"; Renamed "Waxed OCC"
			Paper/Other Materials	x	x	x	x	Mixed/Other Paper	x	x	x	x
			Other Paper	x	x	x	x					

Table A-1 Changes to Waste Component Categories, 1988 to present (continued)

1988-89	*1990*	*1992*	*1994*	1996	1998/99	2000	2002	2004	2006	2008	2010	2012
PLASTIC												
PET Bottles	x	x	PET Pop & Liquor	x	x	x	x	#1 PET Bottles	#1 PET Bottles	x	x	x
			Other PET Bottles	x	x	x	x	*Moved to component "Other plastic bottles"*				
HDPE Bottles	x	x	HDPE Milk & Juice	x	x	x	x	#2 HDPE Natural Bottles	x	x	x	x
								#2 HDPE Colored Bottles	x	x	x	x
			Other HDPE Bottles	x	x	x	x	*Toxic product bottles moved to component "Other plastic bottles"*	*Moved to component "Other rigid packaging"*			
Plastic Packaging	Other Plastic Bottles	x	x	x	x	x	x	x	x	x	x	x
	x	x	Other Rigid Containers	Jars & Tubs	x	x	x	x	Renamed, "Tubs" (Jars moved to appropriate bottle component).	x	x	x
			Other Rigid Packaging	x	x	x	x	x	x	Single-use Food Service	Potentially Compostable Single-use Food Service	x
											Other Single-Use Food Service	Renamed, "Non-Compostable Single-Use Food Service"
										x	x	x
			Grocery/Bread Bags	x	x	x	x	Clean Shopping/Dry Cleaner Bags	x	x	x	x
			Other Film	Garbage Bags	x	x	x	Other Film	x	x	x	x
				x	x	x	x	Other Clean PE Film	x	x	x	Stretch Wrap
												x

Table A-1 Changes to Waste Component Categories, 1988 to present (continued)

1988-89	*1990*	*1992*	*1994*	1996	1998/99	2000	2002	2004	2006	2008	2010	2012
PLASTIC												
Expanded Polystyrene	x	x	x	x	x	x	x	x	x	Expanded Poly. Food-grade	x	x
										x	Rigid Poly. Foam Insulation	x
											x	x
Other Plastic Products	x	x	Plastic Products	x	x	x	x	x	x	Renamed, "Durable Plastic Products"	Plastic Pipe	x
											Foam Carpet Padding	x
											x	x
			Plastic/Other Materials	x	x	x	x	x	x	x	x	x
GLASS												
Non-refillable Pop	x	x	Clear Beverage	x	x	x	x	x	x	x	x	x
Refillable Pop	x	x	Green Beverage	x	x	x	x	x	x	x	x	x
Non-refillable Beer	x	x	Brown Beverage	x	x	x	x	x	x	x	x	x
Refillable Beer	x	x	*(After 1994, characterized according to color)*									
Container Glass	x	x	x	x	x	x	x	x	x	x	x	x
Non-recyclable Glass	x	x	x	Fluorescent Tubes	x	x	x	x	x	x	CFLs	x
											x	x
				Other Glass	Other Glass	Other Glass	Other Glass	Other Glass	Other Glass	Flat Glass	x	x
												Automotive Glass
										x	x	
												x

Table A-1 Changes to Waste Component Categories, 1988 to present (continued)

1988-89	*1990*	*1992*	*1994*	1996	1998/99	2000	2002	2004	2006	2008	2010	2012
METAL												
Aluminum Cans	x	x	x	x	x	x	x	x	x	x	x	x
Aluminum Foil/Containers	x	x	x	x	x	x	x	x	x	x	x	x
Nonferrous			x	Other Nonferrous	x	x	x	x	x	x	x	x
				x	x	x	x	x	x	x	x	x
	x	x	Other Aluminum	Empty Aerosol Cans	x	x	x	x	x	x	x	x
Tinned Cans	x	x	x	x	x	x	x	x	x	x	x	Renamed "Steel Food Cans"
Bi-metal Cans	x	x	*(After 1994, characterized according to predominant metal)*									
Ferrous	x	x	x	x	x	x	x	x	x	x	x	x
Materials	x	x	x	x	x	x	x	x	x	x	x	x
(Before 1998/99, was not characterized)					Metal Oil Filters	x	x	x	x	x	x	x
White Goods	x	x	*(After 1994, banned from disposal. Parts show up in "Mixed Metals")*									
COMPOSTABLE ORGANICS (Split into Compostable and Other in 2012)												
Leaves and Grass	x	x	x	x	x	x	x	x	x	x	x	
Prunings	x	x	x	x	x	x	x	x	x	x	x	
Food											Fats, Oils, Grease	
	x	x	x	x	x	x	x	x	x	x	x	

1988-89	1990	1992	1994	1996	1998/99	2000	2002	2004	2006	2008	2010	2012
OTHER ORGANICS (Split into Compostable and Other in 2012)												
Textiles			x	Textiles/Clothing	x	x	x	*Moved to "Organics"*	Textiles	x	x	
									Mixed Textiles	x	x	
												Felt Carpet Pad; Moved to "Construction Debris"
	x	x	Carpet/ Upholstery	x	x	x	x		Carpet	x	x	Moved to "Construction Debris"
Disposable Diapers	x	x	x	x	x	x	x		Disposable Diapers	x	x	x
(Discarded from samples prior to 1994)			Animal By-Products	x	x	x	x		Animal By-products	x	x	x
Rubber Products	x	x	*Moved to "Other Materials"*	x	x	x	x	*Moved to "Organics"*	Rubber Products	x	x	x
Tires	x	x	*moved to "Other Materials"*	x	x	x	x	*Moved to "Organics"*	Tires	x	x	x
FURNITURE, APPLIANCES, AND ELECTRONICS												
Metal, Textiles, Other Plastics, etc.)			Furniture	x	x	x	x		Furniture	x	x	x
Metal, Textiles, Other Plastics, etc.)			Mattresses	x	x	x	x		Mattresses	x	x	x
(Prior to 1994, split among various materials; Mixed Metal, Textiles, Other Plastics, etc.)			Small Appliances	x	x	x	x		Small Appliances	x	x	x
(Prior to 1994, split among various materials; Mixed Metal, Textiles, Other Plastics, etc.)												
						x	x		Audio/Visual Equipment	x	Cell Phones	x
											x	x
						Televisions & Computer Monitors	Television Sets		Televisions	x	x	x
							Computer Monitors		Computer Monitors	x	x	x
						Other Computer Equipment		*Moved to component "Miscellaneous Organics"*	Other Computer Equipment	x	Renamed "Other Electronics"	x
			A/V Equipment	x	x		x					

1988-89	1990	1992	1994	1996	1998/99	2000	2002	2004	2006	2008	2010	2012
CONSTRUCTION DEBRIS												
Wood		Untreated Wood	x	Dimension Lumber; *new category "CDL Wastes"*	x	x	x	x	x	Clean Dimension Lumber	x	x
										Clean Engineered Wood	x	x
			Crates/Pallets	Other Untreated Wood; *new category "CDL Wastes"*	x	x	x	x	x	x	x	x
				Pallets	x	x	x	*Moved to "CDL Wastes"*	Pallets	x	x	x
				Crates/Boxes	x	x	x	*Moved to "CDL Wastes"; renamed "Crates"*	x	x	x	x
				Moved to new category "CDL Wastes"	*x*	*x*	*x*	*x*	*x*	New Painted Wood	x	x
										Old Painted Wood	x	x
										Creosote-treated Wood	x	x
										Other Treated Wood	x	x
	x	Treated Wood	x	Contaminated Wood; *new category "CDL Wastes"*	x	x	x	x	x	x	x	x
Gypsum Drywall				New Gypsum Scrap; *new category CDL Wastes*	x	x	x	x	x	x	x	x
	x	x	x	Demo Gypsum Scrap; *new category CDL Wastes*	x	x	x	x	x	x	x	x

1988-89	*1990*	*1992*	*1994*	1996	1998/99	2000	2002	2004	2006	2008	2010	2012
CONSTRUCTION DEBRIS												
Fiberglass Insulation	x	x	x	*Moved to new category CDL Wastes*	*x*	*x*	*x*	*x*	x	x	x	x
Rock/ Concrete/ Brick	x	x	x	*Moved to new category CDL Wastes*	*x*	*x*	*x*	*x*	x	x	x	Concrete Asphalt Paving Other Aggregates Rock
Other Construction Debris	x	x	x	Asphaltic Roofing; *new category CDL Wastes*	x	x	x	x	x	Asphalt Shingles	x	x
										Other Asphaltic Roofing	x	x
				Moved to new category CDL Wastes	x	x	x	x	x	x	Cement Fiber Board	x
											x	Single-Ply Roofing Membrane Ceiling Tiles x
Ceramics, Porcelain, China	x	x	x	x	x	x	x	*Moved to "CDL Wastes"; renamed "Ceramics"*	Ceramics	x	x	x

1988-89	1990	1992	1994	1996	1998/99	2000	2002	2004	2006	2008	2010	2012
POTENTIALLY HARMFUL WASTE												
Latex Paints	x	x	x	x	x	x	x	x	x	x	Liquid Latex Paint Dried Latex Paint	x Moved to "Construction Debris"
Adhesives/ Glues	x	x	x	Hazardous Glue/Adhesives Non-hazardous Glue/Adhesives	x x	x x	x x	Renamed "Solvent-based Adhesives/ Glues" Renamed "Water-based Adhesives/Glues"	x x	x x	x x	x x
Paints/Solvents	x	x	x	x	x	x	x	x	x	x	x	x
Cleaners	x	x	x	x	x	x	x	Renamed "Caustic Cleaners"	x	x	x	x
Pesticides & Herbicides	x	x	x	x	x	x	x	x	x	x	x	x
Batteries	x	x	Dry-Cell Batteries Wet-Cell Batteries	x x	x x	x x	x x	x x	x x	x x	x x	Rechargeable Batteries Other Dry-Cell Batteries x
Gasoline/Kerosene	x	x	x	x	x	x	x	x	x	x	x	x
Motor Oil/Diesel Oil	x	x	x	x	x	x	x	x	x	x	x	x
Asbestos	x	x	x	x	x	x	x	x	x	x	x	x
Explosives	x	x	x	x	x	x	x	x	x	x	x	x
Other Chemicals	x	x	x	Other Hazardous Chemicals Other Non-hazardous Chemicals	x x	x x	x x	Medical Waste Other Potentially Harmful Wastes Renamed "Other Cleaners/ Chemicals"	x x x	x x x	x x x	x x x

1988-89	1990	1992	1994	1996	1998/99	2000	2002	2004	2006	2008	2010	2012
OTHER MATERIALS												
Sand, Dirt, Non-distinct Fines			Sand/Soil/Dirt	*Moved to new category CDL Wastes*	*x*	*x*	*x*	*Moved to new category "Fines & Miscellaneous Materials"*	Sand/Soil/Dirt	x	x	x
	x	x	Non-distinct Fines	x	x	x	x	*Moved to new category "Fines & Miscellaneous Materials"*	Non-distinct Fines	x	x	x
Ash	x	x	x	x	x	x	x	*Moved to component "Miscellaneous Organics"*	Miscellaneous Organics	x	x	x
Leather	x	x	x	x	x	x	x					
Fines; also in various "Mixed" and "Other"			Misc. Organics	x	*x*	*x*	*x*					
(Prior to 1994, mostly in "Sand, Dirt, Non-distinct Fines; also in various "Mixed" and "Other" categories)			Misc. Inorganics	x	*x*	*x*	*x*	*Moved to new category "Fines & Miscellaneous Materials"*	Miscellaneous Inorganic	x	x	x

B Sampling Methodology

B.1 Overview

The objective of the 2012 Seattle Waste Composition Study was to provide statistically robust data on the composition of commercial and self-haul wastes in the City of Seattle. Commercial and self-haul wastes were last sampled in 2008. The current project followed the same basic methodology as the 2008 study. However, the component categories and definitions have been revised and are included in Appendix A.

B.2 Substream Definition

For any specific geographic area, the total waste stream is composed of various substreams. A "substream" is determined by the particular generation, collection, or composition characteristics that make it a unique portion of the total waste stream. This study targeted two of three main substreams in Seattle: the commercial and self-haul substreams.[13] These are described in detail below.

B.2.1 Commercial Substream

The **commercial** substream is waste that is: a) generated at businesses and institutions; and, b) collected by contracted hauling companies. In Seattle, all materials are collected by two contracted haulers, each serving two of four distinct "zones" (**Figure A-1**) in the city. [14] One of the contracted haulers handles zones one and four, the other hauler handles zones two and three.[15]

The commercial substream is composed of 24 strata as shown in **Figure A-2**. Strata were defined according to three groupings: city collection zone (one, two, three, or four), shift (day or night), and vehicle type (front loader, rear loader, or roll-off).

[13] The residential substream was not included in this study. For the most recent analysis of Seattle's residential waste stream, please see the *2010 Residential Waste Composition Study Final Report* prepared for the Seattle Public Utilities by Cascadia Consulting Group, Inc.

[14] In 2010, the City of Seattle was divided into four "zones" rather than the two service areas (North and South) previously studied.

[15] Through the Clear Alleys Program, commercial waste from select downtown neighborhoods is collected in bags. This waste was excluded from the study due to the difficulty of segregating and obtaining representative samples of this material and since it represents a small portion (about 3% in 2011 tons) of Seattle's commercial waste.

Figure A-1. Seattle's Collection Zones

Figure A-2. Commercial Strata, by Zone, Shift, and Vehicle Type

Collection Zone	Vehicle Type	Shift: Day	Shift: Night
1	Front Loader	Zone 1 Day FL	Zone 1 Night FL
	Rear Loader	Zone 1 Day RL	Zone 1 Night RL
	Roll-off	Zone 1 Day RO	Zone 1 Night RO
2	Front Loader	Zone 2 Day FL	Zone 2 Night FL
	Rear Loader	Zone 2 Day RL	Zone 2 Night RL
	Roll-off	Zone 2 Day RO	Zone 2 Night RO
3	Front Loader	Zone 3 Day FL	Zone 3 Night FL
	Rear Loader	Zone 3 Day RL	Zone 3 Night RL
	Roll-off	Zone 3 Day RO	Zone 3 Night RO
4	Front Loader	Zone 4 Day FL	Zone 4 Night FL
	Rear Loader	Zone 4 Day RL	Zone 4 Night RL
	Roll-off	Zone 4 Day RO	Zone 4 Night RO

Commercial waste is hauled to the two City-owned disposal stations (North or South Recycling and Disposal Stations) and to Eastmont, Waste Management's private transfer station. Since this study characterized municipal solid waste (MSW) only, no samples were taken from construction, demolition, and landclearing waste (CDL) loads.

B.2.2 Self-haul Substream

The **self-haul** substream is waste that is: a) generated at residences as well as businesses and institutions; and, b) hauled by the household or business that generated the waste. The self-haul substream is composed of four strata as shown in **Figure A-3**. Strata are defined according to generator type and disposal station. All self-haul waste included in the study is disposed at one of two City-owned disposal stations: North or South Recycling and Disposal Stations (NRDS or SRDS). Generator types are defined as follows.

Self-haul non-residential: Waste that is hauled to the NRDS or SRDS by a commercial enterprise (landscaper, contractor, etc.), including waste from residential dwellings.

Self-haul residential: Waste that is hauled to the NRDS or SRDS by a resident from his or her home.

Figure A-3. Self-haul Strata, by Generator Type and Service Area

		Generator Type	
		Non-residential	*Residential*
Disposal	N	Commercial NRDS	Residential NRDS
	S	Commercial SRDS	Residential SRDS

B.3 Sample Allocation

B.3.1 Commercial Samples

For this study, a total of 270 commercial samples were allocated to the 24 commercial strata using the following three sequential steps.

1. Samples were allocated equally to each of the four collection zones: 68 to Zone 1, 68 to Zone 2, 67 to Zone 3, and 67 to Zone 4. An equivalent number of samples provides a comparable level of precision or similar error rates, in the resulting composition data for each of these geographic service areas.
2. Six sampling days were assigned to night shifts. The 90 assigned samples were then assigned to zones and vehicle types by tonnage.[16]
3. The remaining 180 samples were allocated to zones in order to achieve an equal number of samples in each zone. Within each zone, samples were assigned to vehicle types by tonnage – front loaders, rear loaders, and roll-offs.

Sampling days were assigned to transfer stations based on the assumption that waste from Zones 1 and 2 is hauled to the NRDS and waste from Zones 3 and 4 is hauled to the SRDS.

Table A-2 compares the number of planned and actual samples allocated to the various strata. Of the 270 samples allocated, a total of 259 samples were characterized; 45 samples from Zone 1, 56 samples from Zone 2, 77 samples from Zone 3, and 81 samples from Zone 4. A total of 171 samples were characterized from the day shift and 88 from the night shift.

[16] Seattle Public Utilities provided 2011 commercial and self-haul tonnages used for allocating samples in the study.

Table A-2. Commercial Sample Allocation

Collection Zone			Planned Shift Day	Planned Shift Night	Actual Shift Day	Actual Shift Night
1	Vehicle Type	Front Loader	31	3	16	0
		Rear Loader	1	0	12	0
		Roll-off*	24	9	12	5
2	Vehicle Type	Front Loader	18	3	20	0
		Rear Loader	4	4	11	0
		Roll-off*	21	18	19	6
3	Vehicle Type	Front Loader	17	3	12	0
		Rear Loader	4	4	11	2
		Roll-off*	21	18	30	22
4	Vehicle Type	Front Loader	14	17	13	23
		Rear Loader	1	2	2	5
		Roll-off*	24	9	13	25

*Since roll-off accounts are not routed, sampling targets were calculated for Zones 1 and 4 combined and for Zones 2 and 3 combined based on tonnage. The resulting sampling targets were then assigned equally to Zones 1 and 4 and to Zones 2 and 3.

B.3.2 Self-haul Samples

Since the proportion of self-haul tonnage transported to the NRDS and SRDS is nearly equal (51% and 49%, respectively), half the self-haul samples were allocated to each facility: 108 at NRDS and 108 at SRDS. This study did not stratify samples by generator type, since data from the study will also be used to determine the relative mix of residential and non-residential loads arriving at each recycling and disposal station.

In 2012, a total of 226 self-haul samples were characterized, 117 at the NRDS and 109 at the SRDS.

B.4 Sampling Calendar

Due to the expense of moving the sampling crew from site to site, sorting occurred at only one facility per sampling day. Since the field crew can sort approximately 15 commercial loads or 18 self-haul loads per day, 18 days of commercial and 12 days of self-haul sampling were required to meet the study's sampling goals. In order to capture any seasonal variation, the sampling events were distributed across the 12-month study period. Sampling occurred every other month for five consecutive days each selected month, for a total of 30 days of sampling. Each sampling month consisted of three days of commercial sampling and two days of self-haul sampling. Six of the 18 days of commercial sampling took place at night, at the Eastmont Transfer Station.

Working around major holidays and the sorting crew's availability, sampling dates within each month were selected using a random number generator, and refined so that the distribution

across weeks of the month and days of the week would be roughly even. Whenever possible, the sampling dates for both the commercial and self-haul waste sorts were scheduled contiguously. The sampling calendar was designed using the following steps.

1. The week of the month was randomly selected using the *Rand()* function in Excel.
2. The start day of each month's sampling was typically either a Monday or Tuesday.
3. The six night sampling events were randomly assigned to the six sampling months.
4. Two weekend sampling events (one day and one night) for commercial and three weekend days for self-haul were allocated based on 2011 tonnage data.
5. An equal number of days for both commercial and self-haul were assigned to each of the city's transfer stations. Since each sampling week consisted of five days and most sampling months included one night sampling event at Eastmont Transfer Station, four days were equally split between the NRDS and SRDS.
6. Finally, a random selection method was used to adjust the sampling events for commercial, self-haul, and each transfer station to achieve a balanced distribution across days of the week and months of the year.

The sampling calendar is shown in **Table A-3**. The resulting allocation of waste sampling days for the commercial and self-haul substreams is shown in Table A-4 and **Table A-5**, respectively.

Table A-3. Sampling Calendar

Date	Facility	Sector	Day/Night	No. of Samples	Day of the Week	Week of the Month
2/24/12	NRDS	COM	Day	15	Friday	4
2/25/12	SRDS	COM	Day	15	Saturday	4
2/26/12	SRDS	SH	Day	18	Sunday	4
2/27/12	NRDS	COM	Day	15	Monday	4
2/28/12	SRDS	SH	Day	18	Tuesday	4
4/16/12	SRDS	SH	Day	18	Monday	3
4/17/12	NRDS	SH	Day	15	Tuesday	3
4/18/12	SRDS	COM	Day	15	Wednesday	3
4/19/12	NRDS	COM	Day	18	Thursday	3
4/19/12	Eastmont	COM	Night	15	Thursday	3
6/4/12	Eastmont	COM	Night	15	Monday	1
6/5/12	Eastmont	COM	Night	15	Tuesday	1
6/7/12	NRDS	SH	Day	18	Thursday	1
6/8/12	SRDS	COM	Day	15	Friday	2
6/9/12	NRDS	SH	Day	18	Saturday	2
8/18/12	Eastmont	COM	Night	15	Saturday	3
8/20/12	NRDS	COM	Day	15	Monday	3
8/21/12	SRDS	COM	Day	15	Tuesday	3
8/22/12	NRDS	SH	Day	18	Wednesday	4
8/23/12	SRDS	SH	Day	18	Thursday	4
10/2/12	SRDS	COM	Day	15	Tuesday	1
10/2/12	Eastmont	COM	Night	15	Tuesday	1
10/4/12	SRDS	COM	Day	18	Thursday	1
10/5/12	NRDS	SH	Day	15	Friday	1
10/6/12	NRDS	SH	Day	18	Saturday	1
12/10/12	SRDS	SH	Day	18	Monday	2
12/11/12	NRDS	COM	Day	15	Tuesday	2
12/12/12	SRDS	SH	Day	18	Wednesday	2
12/12/12	Eastmont	COM	Night	15	Wednesday	2
12/14/12	NRDS	COM	Day	15	Friday	2

Table A-4. Distribution of Commercial Sampling Days

Zone	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
1	1	3		1			5
2		1	1		2		4
3	1	1	1	2		1	6
4	1				1	1	3
Total	**3**	**5**	**2**	**3**	**3**	**2**	**18**

Table A-5. Distribution of Self-haul Sampling Days

Zone	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
1					1	1	1	3
2		1		1			1	3
3		1	1					2
4	1		1	1	1			4
Total	**1**	**2**	**2**	**2**	**2**	**1**	**2**	**12**

B.5 Hauler and Transfer Station Participation

B.5.1 Commercial Sampling

Each contracted hauler received the sampling schedule for the year. Prior to each month's sampling event, the affected haulers were sent a vehicle selection sheet. (A sample vehicle selection sheet is included in Appendix F.) The haulers were then asked to notify the drivers of the loads selected for sampling and record the estimated time of arrival for each load on the vehicle selection sheet to assist the Field Supervisor in identifying sample trucks.

This study was designed to sample "pure" loads of commercial and self-haul waste only. Both contracted haulers operate vehicles that service both commercial customers and multi-family residences. During sampling events, selected vehicles either brought in "pure" commercial loads or made a series of commercial stops at the beginning or end of their route so that the sorting crew could take a pure sample.

B.5.2 Self-haul Sampling

Staff at the City's two transfer stations received the sampling schedule for the year and were informed prior to each sampling event.

B.6 Load Selection

B.6.1 Commercial Loads

Typically, commercial collection vehicles transport more than one load per shift. Since there were more vehicles per shift than the quota to be sampled, numerical identifiers assigned to every expected load on a given sampling day designated specific loads for sampling. A random number generator sorted the identifiers by vehicle type; loads were then selected in that randomly sorted sequence until the quota for each vehicle type was filled. Selected loads for a sampling day were summarized on vehicle selection sheets such as the one shown in F**Field Forms**.

B.6.2 Self-haul Loads

Self-haul loads were systematically selected at each facility. Systematic selection consists of taking every "n^{th}" vehicle that enters the facility after a randomly selected start time. The sampling intervals (n) were determined by dividing the day's expected number of arriving vehicles by the number of samples needed on that day. This method of selecting vehicles provided a representative number of samples for the non-residential and residential generators

of self-haul waste. The expected traffic count was based on either the average weekday or weekend vehicle count from the same month in 2011.

B.7 Field Procedures

The Field Supervisor coordinated vehicle selection, sample extraction, sorting, and disposal of sorted waste with the transfer station manager.

When a vehicle selected for sampling arrived, the Field Supervisor obtained the origin of the load, truck and route information if it was a commercial load, and generator and residence type if it was a self-hauled load. The Field Supervisor asked both commercial and self-haul drivers to identify the type of business the sample load was from. **Table A-6** lists Standard Industry Codes (SIC) by business type, which the Field Supervisor used to categorize loads. Information collected from each driver, including SICs, was recorded on the load's corresponding tally sheet, appearing in F**Field Forms**.

Table A-6. SIC Codes, by Business Type

Business Type	SIC Codes
Construction, Demolition, and Landclearing	15-17
Education	82
Health Care	80
Hotel/Motel	70
Manufacturing	20, 22-26, 28-36, 38-39, 372, 373, 376
Office	01-02, 08-09, 10, 14, 27, 48, 49, 60-67, 73, 81
Other Non-residential	- -
Other Services	7, 55, 72, 75, 76, 78-79, 84, 86, 89
Restaurant	58
Retail	52-54, 56-57, 59
Transportation	40-47, 371, 374, 375, 379
Wholesale	50, 51
Mixed Commercial Generators	- -

B.7.1 Commercial Samples

As a selected vehicle tipped its load at NRDS or SRDS, a loader operator "nosed" the bucket of the loader into the stream of material falling from the truck and captured about 1 cubic yard (approximately 250 pounds) of commercial waste. At Eastmont, the entire selected truckload of waste was dumped onto the floor at the transfer station. Whenever possible, an imaginary 8-section, 2-layer grid (16 cells total) was superimposed on the load, and one of the 16 cells was randomly selected cell for sampling. From that cell, the loader extracted approximately 250 pounds of waste and dumped it onto a separate tarp for sorting.

B.7.2 Self-haul Samples

Large (greater than 250 pounds) self-haul loads were entirely sorted, or a sample was randomly selected from the load using a superimposed 8 cell grid and a pre-assigned random number that identified the cell from which to extract a sample. The randomly selected cell number appeared on

the vehicle selection sheet. If the load was less than 250 pounds, then the next vehicle of the same generator group (residential or commercial) was also selected for sampling. A sample was captured from this vehicle and combined with the first load, so that the weight of the two samples equaled at least 250 pounds.

The Field Supervisor gave the drivers of non-passenger vehicles a net weight card to use to record the load weight once the vehicle scaled out. For passenger vehicles (which transfer station staff does not weigh), the total weight of the sample was equal to the weight of the load if the full load was sorted. Otherwise, the Field Supervisor estimated what percentage of the load was sorted and estimated the weight of the load.

Once a sample of commercial or self-haul waste was selected, it was placed on a tarp for sorting. Each sample was sorted by hand into the defined component categories. (See AWaste Component Categories for component definitions). Each sample was sorted to the greatest reasonable detail.

In some cases, a *supermix* of material (a residue composed of mixed material, each piece smaller than one-half inch) remained after sorting a sample. In these cases, the Field Supervisor weighed the combined *supermix* (never totaling more than 10 pounds) and visually estimated the percentage of each component material in the *supermix*. The weights of all materials were recorded on tally sheets; an example tally sheet is shown in Appendix F.

C Comments on Monthly Sampling Events

For the 2012 study, sampling occurred every other month for four or five consecutive days each selected month, for a total of 31 days of sampling. Each sampling month consisted of three days of commercial sampling and one to two days of self-haul sampling. This appendix summarizes sampling activities for each selected month.

C.1 February 2012

Sampling took place over five days: 2/24 through 2/28. **Table A-7** compares the number of samples that were actually sorted to the number originally planned, by date, sector, and zone. In total, 43 commercial samples and 36 self-haul samples were sorted.

Table A-7. Summary of Planned vs. Actual Samples Completed by Date, Substream, and Zone

Date	Friday, 2/24		Saturday, 2/25		Sunday, 2/26	Monday, 2/27		Tuesday, 2/28
Substream	Com		Com		SH	Com		SH
Facility	NRDS		SRDS		SRDS	SRDS		SRDS
Truck Type	Packer	Roll-off	Packer	Roll-off	Undesignated	Packer	Roll-off	Undesignated
Zone 1 Target	9	6						
Zone 2 Target			2	3		3	2	
Zone 3 Target			2	3		2	3	
Zone 4 Target			2	3		2	3	
No Zone Target					18			18
Total Target Samples	15		15		18	15		18
Zone 1 Actual	8	4						
Zone 2 Actual		1	4	3		3	1	
Zone 3 Actual	1	1		3		2	4	
Zone 4 Actual			2	1		2	3	
No Zone Actual					18			18
Total Actual Samples	15		13		18	15		18
Zone 2 Difference	0	1	2	0	0	0	-1	0
Zone 3 Difference	1	1	-2	0	0	0	1	0
Zone 4 Difference	0	0	0	-2	0	0	0	0
No Zone Difference	0	0	0	0	0	0	0	0
Difference by Day	0		-2		0	0		0

The sampling targets were reached for both self-haul sampling days. Commercial samples differed slightly from the targeted number of samples by zone for the following reasons.

- On 2/24 and 2/27, the completed samples differed slightly from the targets by zone, though the daily targets of 15 samples were met.
    - On 2/24, the plan called for nine packers and six roll-off boxes from Zone 1. Because Waste Management reported that only eight packers and four roll-offs were scheduled to arrive that day, loads from Zones 2 and 3 were sampled instead.
    - On 2/27, only one roll-off load was scheduled to arrive from Zone 2 so an additional roll-off sample was collected in its place, from Zone 3.
- On 2/25, two fewer samples were captured than were planned. Fewer commercial loads are hauled to Seattle's transfer stations on Saturdays so the target was not reached though every commercial load was sampled that day.

C.2 April

Sampling took place over four days: 4/16 through 4/19, though 4/19 included both day and night shift sampling events. **Table A-8** compares the number of samples that were actually sorted to the number originally planned, by date, sector, and zone. In total, 42 commercial samples and 37 self-haul samples were sorted.

Table A-8. Summary of Planned vs. Actual Samples Completed by Date and Substream

Date	Substream	Shift	Truck Type	Target (All Zones)	Actual (All Zones)	Difference
16-Apr	SH	Day	Undesignated	18	18	0
17-Apr	SH	Day	Undesignated	18	18	0
18-Apr	Com	Day	Packer	7	7	0
			Roll-off	8	8	0
19-Apr	Com	Day	Packer	9	9	0
			Roll-off	6	5	-1
	SH		Undesignated	0	1	1
19-Apr	Com	Night	Packer	6	4	-2
			Roll-off	9	9	0
	Total Self-haul			**36**	**37**	**1**
	Total Commercial			**45**	**42**	**-2**

The sampling targets were reached for both self-haul sampling days. Commercial samples differed slightly from the targeted number of samples for the following reasons.

- On 4/19 during the day shift, the number of completed samples was one roll-off short of the target. According to the list received from the haulers, two more roll-offs should have been available for sampling. Of those two, one was missed because the loader was not ready and another was delivered to the other station instead.
- On 4/19 during the day shift, one self-haul vehicle was sampled when the crew supervisor realized they would not make the commercial sampling target.
- On 4/19 during the night shift, the total was two packers short of the targets. The loader pushed one packer before the sorting supervisor could communicate with him. Other than the pushed load, we sampled all packer loads that were available.

C.3 June

Sampling took place from 6/4 through 6/9. **Table A-9** compares the number of samples that were actually sorted to the number originally planned, by date and sector. In total, 40 commercial samples and 36 self-haul samples were sorted.

Table A-9. Summary of Planned vs. Actual Samples Completed by Date and Substream

Date	Substream	Shift	Truck Type	Target (All Zones)	Actual (All Zones)	Difference
6/4/2012	COM	Night	Packer	6	5	-1
			Roll-off	9	10	1
6/5/2012	COM	Night	Packer	6	4	-2
			Roll-off	9	8	-1
6/7/2012	SH	Day	Undesignated	18	18	0
6/8/2012	COM	Day	Packer	7	8	1
			Roll-off	8	5	-3
6/9/2012	SH	Day	Undesignated	18	18	0
	Total Self-haul			**36**	**36**	**0**
	Total Commercial			**45**	**40**	**-5**

The sampling targets were reached for both self-haul sampling days. Commercial samples differed from the targeted number of samples for the following reasons.

- On 6/4 and 6/5 during the night shift, the number of completed samples was three short of the target. The loader pushed two loads before the sorting manager could communicate with him. The third selected load arrived before 5:30pm, when our sorting crew manager arrives for the night shift. There were no contingencies available.
- On 6/8 during the day shift, three roll-offs loads that we expected did not arrive. One additional packer load was sampled.

C.4 August

Sampling took place from 8/20 through 8/23. **Table A-10** compares the number of samples that were actually sorted to the number originally planned, by date and sector. In total, 48 commercial samples and 36 self-haul samples were sorted.

Table A-10. Summary of Planned vs. Actual Samples Completed by Date and Substream

Date	Substream	Shift	Truck Type	Target (All Zones)	Actual (All Zones)	Difference
8/20/2012	COM	Day	Packer	9	6	-3
			Roll-off	6	9	3
8/21/2012	COM	Day	Packer	7	8	1
			Roll-off	8	9	1
8/22/2012	SH	Day	Undesignated	18	18	0
						0
8/23/2012	SH	Day	Undesignated	18	18	0
						0
8/23/2012	COM	Night	Packer	6	5	-1
			Roll-off	9	11	2
	Total Self-haul			**36**	**36**	**0**
	Total Commercial			**45**	**48**	**3**

The sampling targets were reached for both self-haul sampling days. Commercial samples differed from the targeted number of samples for the following reasons.

- On 8/20, three fewer packer loads and three more roll-off loads were sampled than planned. At least one of the packer loads was too mixed to sample.[17]
- On 8/21, one additional packer and one additional roll-off were sampled to make up for prior shortages.
- On the night of 8/23, there were only five packer loads available for sampling.

C.5 October

Sampling took place from 10/2 through 10/6. **Table A-11** compares the number of samples that were actually sorted to the number originally planned, by date and sector. In total, 45 commercial samples and 36 self-haul samples were sorted.

[17] In June, some of the selected Zone 2 and 3 packer loads were too mixed with multifamily waste to sample. As a result, Cascadia met with CleanScapes staff on August 14 to discuss the challenge or obtaining pure commercial samples. During the August sampling event, the drivers of the CleanScapes loads selected for sampling ensured that a pure commercial sample could be extracted from their loads. Unfortunately, there were issues with Waste Management packer trucks being too mixed in August.

Table A-11. Summary of Planned vs. Actual Samples Completed by Date and Substream

Date	Substream	Shift	Truck Type	Target (All Zones)	Actual (All Zones)	Difference
10/2/2012	Com	Day	Packer	7	11	4
			Roll-off	8	4	-4
10/2/2012	Com	Night	Packer	6	5	-1
			Roll-off	9	10	1
10/4/2012	Com	Day	Packer	7	8	1
			Roll-off	8	7	-1
10/5/2012	SH	Day	Undesignated	18	18	0
10/6/2012	SH	Day	Undesignated	18	18	0
	Total Self-haul			**36**	**36**	**0**
	Total Commercial			**45**	**45**	**0**

The sampling targets were reached for both self-haul sampling days. Commercial samples differed from the targeted number of samples for the following reasons.

- On 10/2, four more packer loads and four fewer roll-off loads were sampled than planned.
- On the night of 10/2, one less packer and one additional roll-off were sampled.
- On 10/4, one additional packer and one less roll-off were sampled.

C.6 December

Sampling took place from 12/10 through 12/14. **Table A-12** compares the number of samples that were actually sorted to the number originally planned, by date and sector. In total, 47 commercial samples and 36 self-haul samples were sorted.

Table A-12. Summary of Planned vs. Actual Samples Completed by Date and Substream

Date	Substream	Shift	Truck Type	Target (All Zones)	Actual (All Zones)	Difference
12/10/2012	SH	Day	Undesignated	18	18	0
						0
12/11/2012	COM	Day	Packer	7	11	4
			Roll-off	8	5	-3
12/12/2012	SH	Day	Undesignated	18	18	0
						0
12/12/2012	COM	Night	Packer	6	5	-1
			Roll-off	9	10	1
12/14/2012	COM	Day	Packer	9	8	-1
			Roll-off	6	8	2
	Total Self-haul			**36**	**36**	**0**
	Total Commercial			**45**	**47**	**2**

The sampling targets were reached for both self-haul sampling days. Commercial samples differed from the targeted number of samples for the following reasons.

- On 12/11, four more packer loads and three less roll-off loads were sampled than planned.
- On the night of 12/12, one less packer and one additional roll-off were sampled.
- On 12/14, one fewer packer and two more roll-offs were sampled.

D Waste Composition Calculations

D.1 Composition Calculations

The composition estimates represent the **ratio of the components' weight to the total waste** for each noted substream. They are derived by summing each component's weight across all of the selected records and dividing by the sum of the total weight of waste, as shown in the following equation:

$$r_j = \frac{\sum_i c_{ij}}{\sum_i w_i}$$

where:

c = weight of particular component

w = sum of all component weights

for i 1 to n

where n = number of selected samples

for j 1 to m

where m = number of components

The confidence interval for this estimate is derived in two steps. First, the variance around the estimate is calculated, accounting for the fact that the ratio includes two random variables (the component and total sample weights). The **variance of the ratio estimator** equation follows:

$$\hat{V}_{r_j} = \left(\frac{1}{n}\right) \cdot \left(\frac{1}{\overline{w}^2}\right) \cdot \left(\frac{\sum_i \left(c_{ij} - r_j w_i\right)^2}{n-1}\right)$$

where:

$$\overline{w} = \frac{\sum_i w_i}{n}$$

Second, **confidence intervals** at the 90% confidence level are calculated for a component's mean as follows:

$$r_j \pm \left(t \cdot \sqrt{\hat{V}_{r_j}}\right)$$

where:

t = the value of the t-statistic (1.645) corresponding to a 90% confidence level

For more detail, please refer to Chapter 6 "Ratio, Regression and Difference Estimation" of *Elementary Survey Sampling* by R.L. Scheaffer, W. Mendenhall and L. Ott (PWS Publishers, 1986).

D.2 Weighted Averages

The overall commercial and overall self-haul waste composition estimates were calculated by performing a weighted average across the relevant substreams. For the commercial substream, the overall estimate was calculated by performing a weighted average based on the tonnage carried by each zone, vehicle type, and shift. For the self-haul substream, the overall estimate was calculated by performing a weighted average based on the tonnage hauled each season to each site, by vehicle type.

Seattle provided the estimate of tonnage disposed by the commercial and self-haul substreams for the study period (January thru December 2012). In addition, the two authorized commercial haulers provided the tonnage split for waste hauled by compactor and loose roll-off vehicles for the day and night shifts. The composition estimates for each substream and subpopulation were applied to the relevant tonnages to estimate the amount of waste disposed for each component category.

The **weighted average for an overall composition estimate** is performed as follows:

$$O_j = (p_1 * r_{j1}) + (p_2 * r_{j2}) + (p_3 * r_{j3}) + \ldots$$

where:

p = the proportion of tonnage contributed by the noted substream

r = ratio of component weight to total waste weight in the noted substream

for j 1 to m

where m = number of components

The **variance of the weighted average** is calculated:

$$VarO_j = (p_1^{\,2} * \hat{V}_{r_{j1}}) + (p_2^{\,2} * \hat{V}_{r_{j2}}) + (p_3^{\,2} * \hat{V}_{r_{j3}}) + \ldots$$

The weighting percentages that were used to perform the composition calculations are listed below.

Table A-13 through **Table A-17** pertain to the commercial substream and its respective subpopulations, and **Table A-18** through **Table A-26** correspond to the self-haul substream and its respective subpopulations. Weighting percentages were not used to perform composition calculations on commercial or self-haul sampling data by generator type.

Of the 134,089 total tons of materials in the commercial substream that was delivered to the SRDS and NRDS in 2012, contracted haulers reported detailed trip level tonnage data for 124,982 tons. The 9,107 tons that SPU does not have trip level data for is from materials hauled by non-contracted haulers. Trip level tonnage data is needed to calculate weights by zone, day, and truck type.

In Tables D-1 through D-5 below, the actual trip level data from contracted haulers was scaled up to the total tons by assuming the proportions of tons among substreams was the same between the hauler reported trip level tonnages and the 9,107 tons, for which Seattle does not have detailed trip level data. Data in the actual column are reported trip level tonnages, and the scaled column applies the proportions from the reported trip level tonnages to the total tonnages.

Table A-13. Weighting Percentages: Overall Commercial

Hauler Shift Vehicle Type	Tons Disposed Actual	 Scaled	Percent of Total
Zone 1 Waste Management			
Day			
Front Loader	11,651	12,500	9.32%
Rear Loader	1,178	1,264	0.94%
Compactor Roll-off	3,198	3,431	2.56%
Loose Roll-off	1,527	1,639	1.22%
Night			
Front Loader	847	909	0.68%
Rear Loader	5	5	0.00%
Compactor Roll-off	898	963	0.72%
Loose Roll-off	412	442	0.33%
Zone 4 Waste Management			
Day			
Front Loader	12,941	13,884	10.35%
Rear Loader	1,582	1,698	1.27%
Compactor Roll-off	4,465	4,791	3.57%
Loose Roll-off	2,572	2,760	2.06%
Night			
Front Loader	8,191	8,788	6.55%
Rear Loader	1,063	1,140	0.85%
Compactor Roll-off	4,055	4,350	3.24%
Loose Roll-off	2,674	2,869	2.14%
Zone 2 & 3 CleanScapes			
Day			
Front Loader	22,578	24,223	18.06%
Rear Loader	5,897	6,327	4.72%
Compactor Roll-off	10,497	11,262	8.40%
Loose Roll-off	2,231	2,394	1.79%
Night			
Front Loader	3,063	3,286	2.45%
Rear Loader	4,158	4,461	3.33%
Compactor Roll-off	18,303	19,637	14.64%
Loose Roll-off	994	1,067	0.80%
Overall	**124,982**	**134,089**	**100%**

Table A-14. Weighting Percentages: Commercial Front Loaders

Hauler / Shift	Tons Disposed Actual	Tons Disposed Scaled	Percent of Total
Zone 1 Waste Management			
Day	11,651	12,500	19.66%
Night	847	909	1.43%
Zone 4 Waste Management			
Day	12,941	13,884	21.83%
Night	8,191	8,788	13.82%
Zone 2 & 3 CleanScapes			
Day	22,578	24,223	38.09%
Night	3,063	3,286	5.17%
Overall	**59,270**	**63,589**	**100%**

Table A-15. Weighting Percentages: Commercial Rear Loaders

Hauler / Shift	Tons Disposed Actual	Tons Disposed Scaled	Percent of Total
Zone 1 Waste Management			
Day	1,178	1,264	8.49%
Night	5	5	0.03%
Zone 4 Waste Management			
Day	1,582	1,698	11.40%
Night	1,063	1,140	7.65%
Zone 2 & 3 CleanScapes			
Day	5,897	6,327	42.48%
Night	4,158	4,461	29.95%
Overall	**13,883**	**14,895**	**100%**

Table A-16. Weighting Percentages: Commercial Compactor Roll-offs

Hauler / Shift	Tons Disposed Actual	Tons Disposed Scaled	Percent of Total
Zone 1 Waste Management			
Day	3,198	3,431	7.72%
Night	898	963	2.17%
Zone 4 Waste Management			
Day	4,465	4,791	10.78%
Night	4,055	4,350	9.79%
Zone 2 & 3 CleanScapes			
Day	10,497	11,262	25.35%
Night	18,303	19,637	44.19%
Overall	**41,417**	**44,435**	**100%**

Table A-17. Weighting Percentages: Commercial Loose Roll-offs

Hauler / Shift	Tons Disposed Actual	Tons Disposed Scaled	Percent of Total
Zone 1 Waste Management			
Day	1,527	1,639	14.67%
Night	412	442	3.96%
Zone 4 Waste Management			
Day	2,572	2,760	24.71%
Night	2,674	2,869	25.69%
Zone 2 & 3 CleanScapes			
Day	2,231	2,394	21.43%
Night	994	1,067	9.55%
Overall	**10,411**	**11,170**	**100%**

Table A-18. Weighting Percentages: Overall Self Haul

Site / Vehicle Type / Season	Tons Disposed	Percent of Total
NRDS		
Passenger Car		
Spring	1,023	1.45%
Summer	1,222	1.73%
Autumn	1,016	1.44%
Winter	834	1.18%
Truck		
Spring	7,642	10.84%
Summer	8,329	11.82%
Autumn	7,465	10.59%
Winter	6,199	8.80%
SRDS		
Passenger Car		
Spring	500	0.71%
Summer	560	0.80%
Autumn	615	0.87%
Winter	513	0.73%
Truck		
Spring	9,436	13.39%
Summer	9,608	13.63%
Autumn	8,051	11.42%
Winter	7,458	10.58%
Overall	**70,474**	**100%**

Table A-19. Weighting Percentages: Self-haul at the NRDS

Vehicle Type Season	Tons Disposed	Percent of Total
Passenger Car		
Spring	1,023	3.03%
Summer	1,222	3.62%
Autumn	1,016	3.01%
Winter	834	2.47%
Truck		
Spring	7,642	22.66%
Summer	8,329	24.69%
Autumn	7,465	22.13%
Winter	6,199	18.38%
Overall	**33,731**	**100%**

Table A-20. Weighting Percentages: Self-haul at the SRDS

Vehicle Type Season	Tons Disposed	Percent of Total
Passenger Car		
Spring	500	1.36%
Summer	560	1.53%
Autumn	615	1.67%
Winter	513	1.40%
Truck		
Spring	9,436	25.68%
Summer	9,608	26.15%
Autumn	8,051	21.91%
Winter	7,458	20.30%
Overall	**36,743**	**100%**

Table A-21. Weighting Percentages: Self-haul Passenger Vehicles

Site Season	Tons Disposed	Percent of Total
NRDS		
Spring	1,023	16.28%
Summer	1,222	19.45%
Autumn	1,016	16.17%
Winter	834	13.27%
SRDS		
Spring	500	7.96%
Summer	560	8.92%
Autumn	615	9.79%
Winter	513	8.16%
Overall	**6,285**	**100%**

Table A-22. Weighting Percentages: Self-haul Trucks

Site Season	Tons Disposed	Percent of Total
NRDS		
Spring	7,642	11.91%
Summer	8,329	12.98%
Autumn	7,465	11.63%
Winter	6,199	9.66%
SRDS		
Spring	9,436	14.70%
Summer	9,608	14.97%
Autumn	8,051	12.54%
Winter	7,458	11.62%
Overall	**64,189**	**100%**

Table A-23. Weighting Percentages: Self-haul in Spring

Site Vehicle Type	Tons Disposed	Percent of Total
NRDS		
Passenger Car	1,023	5.50%
Truck	7,642	41.08%
SRDS		
Passenger Car	500	2.69%
Truck	9,436	50.73%
Overall	**18,602**	**100%**

Table A-24. Weighting Percentages: Self-haul in Summer

Site Vehicle Type	Tons Disposed	Percent of Total
NRDS		
Passenger Car	1,222	6.20%
Truck	8,329	42.23%
SRDS		
Passenger Car	560	2.84%
Truck	9,608	48.72%
Overall	**19,720**	**100%**

Table A-25. Weighting Percentages: Self-haul in Autumn

Site Vehicle Type	Tons Disposed	Percent of Total
NRDS		
Passenger Car	1,016	5.93%
Truck	7,465	43.53%
SRDS		
Passenger Car	615	3.59%
Truck	8,051	46.95%
Overall	**17,147**	**100%**

Table A-26. Weighting Percentages: Self-haul in Winter

Site Vehicle Type	Tons Disposed	Percent of Total
NRDS		
Passenger Car	834	5.56%
Truck	6,199	41.31%
SRDS		
Passenger Car	513	3.42%
Truck	7,458	49.71%
Overall	**15,004**	**100%**

D.3 Comparison Calculations

Identifying statistically significant differences requires a two-step calculation. First, assuming that the two groups to be compared have the same variance, a **pooled sample variance** is calculated:

$$S_{pool}{}^2 = \frac{\left[(n1-1)\cdot\left(n1\cdot\hat{V}_{r_j1}\right)\right]+\left[(n2-1)\cdot\left(n2\cdot\hat{V}_{r_j2}\right)\right]}{n1+n2-2}$$

Next, the **t-statistic** is constructed:

$$t = \frac{(r1 - r2)}{\sqrt{\frac{S_{pool}^{\ 2}}{n1} + \frac{S_{pool}^{\ 2}}{n2}}}$$

The **p-value** of the t-statistic is calculated based on (n1+n2 -2) degrees of freedom.

E Year-to-Year Comparison Calculations

This section outlines the technical issues involved with the year-to-year comparison calculations. The calculation formulae are outlined in Appendix D.

E.1 Background

In an ongoing effort to monitor the types and amounts of materials disposed locally, Seattle has performed several waste composition studies. Differences are often apparent between study periods. In this appendix, selected results from the year 2012 study are compared to 1988/89, 1990, 1992, 1996, 2000, 2004, and 2008 findings.[18]

For the purposes of this study, composition variations in the percentage of each broad material category disposed were measured within the following substreams:

- Commercial Substream
  1988/89, 1992, 1996, 2000, 2004, and 2008 vs. 2012
- Self-haul Substream
  1988/89, 1990, 1992, 1996, 2000, 2004, and 2008 vs. 2012

In order to control for population changes and other factors that may influence the total amount of waste disposed from year to year, the tests described in this appendix measure waste proportions, and not actual tonnage. For example, if newspaper accounts for 5% of a particular substream's disposed waste each year, and that substream disposed a total of 1,000 tons of waste in one year and 2,000 tons of waste in the next, while the amount of newspaper increased from 50 to 100 tons, the percentage remained the same. Therefore, the tests would indicate that there had been no change.

The purpose of conducting these comparison tests is to identify statistically significant changes in the percentage of broad material categories of waste disposed in each substream over time. One specific example is stated as follows:

Hypothesis: "There is no statistically significant difference, between the 2008 and 2012 study periods, in the percentage of paper disposed in the commercial substream."

Statistics are then employed to look for evidence disproving the hypothesis. A "significant" result means that there is enough evidence to disprove the hypothesis, and it can be concluded that there is a true difference across years. "Insignificant" results indicate that either a) there is no true difference, or b) even though there may be a difference, there is not enough evidence to prove it.

[18] The 2004 and 2008 studies were also conducted by Cascadia Consulting Group, and followed the same basic methodology as the 2012 project.

The purpose of these tests is to identify changes across years. However, the study did not attempt to investigate *why* or *how* these changes occurred. The changes may be due to a variety of factors. For example, a decrease in paper disposed in the commercial substream could be due to any combination of the following:

- Consumer preferences—electronic media might have captured some of the market previously held by paper;
- Technology—manufacturers might use thinner paper than in the past, which would decrease the weight of paper, even if the same number of pages was disposed; or
- Recycling—more businesses may participate in paper recycling programs.

E.2 Statistical Considerations

The analyses are based on the component percentages, by weight, for each selected substream. As described in Appendix D, these percentages are calculated by dividing the sum of the selected component weights by the sum of the corresponding sample weights. T-tests (modified for ratio estimation) were used to examine the year-to-year variation.

E.2.1 Normality

The distribution of some of the broad waste categories (particularly the hazardous materials) is skewed and may not follow a normal distribution. Although t-tests assume a normal distribution, they are very robust to departures from this assumption, particularly with large sample sizes. In addition, the broad waste categories are sums of several individual waste components, which improve our ability to meet the assumptions of normality.

E.2.2 Dependence

There may be dependence between waste components (if a person disposes of component A, they always dispose of component B at the same time).

There is certainly a degree of dependence between the calculated percentages. (Since the percentages sum to 100, if the percentage of component A increases, the percentage of some other component must decrease). This type of dependence is somewhat controlled by choosing only a portion of the waste categories for the analyses.

E.2.3 Multiple T-Tests

In all statistical tests, there is a chance of incorrectly concluding that a result is significant. The year-to-year comparison required conducting several t-tests, (one for each waste category within each set of substreams) **each** of which carries that risk. However, we were willing to accept only a 10% chance, **overall**, of making an incorrect conclusion. Therefore, each test was adjusted by setting the significance threshold to $\frac{0.10}{w}$ (w = the number of t-tests).

The adjustment can be explained as follows:

For each test, we set a $1-\frac{0.10}{w}$ chance of not making a mistake, which results in a $\left(1-\frac{0.10}{w}\right)^{w}$ chance of not making a mistake during all w tests.

Since one minus the chance of not making a mistake equals the chance of making a mistake, by making this adjustment, we have set the overall risk of making a wrong conclusion during any one of the tests at $\left(1-\left(1-\frac{0.10}{w}\right)^{w}\right)=0.10$.

The chance of a "false positive" for this study is restricted to 10% overall, or 1.25% for each test (10% divided by the eight tests within each substream equals 1.25%).

For more detail regarding this issue, please refer to Section 11.2 "The Multiplicity Problem and the Bonferroni Inequality" of *An Introduction to Contemporary Statistics* by L.H. Koopmans (Duxbury Press, 1981).

E.3 Interpreting the Calculation Results

The following tables include detailed calculation results for the commercial and self-haul substreams. The comparisons are shown for all eight tests; an asterisk indicates the statistically significant differences.

For the purposes of this study, only those calculation results with a p-value of less than 1.25% are considered to be statistically significant. As described above, the threshold for determining statistically significant results (the "alpha-level") is conservative, accounting for the fact that so many individual tests were calculated.

The t-statistic is calculated from the data; according to statistical theory, the larger the absolute value of the t-statistic, the less likely that the two populations have the same mean. The p-value describes the probability of observing the calculated t-statistic if there were no true difference between the population means.

For example, in Table A-27 the proportion of **plastic** in the disposed commercial substream increased from 7.0% to 12.5% across the study periods. The t-statistic is relatively large (5.7741) and the probability (p-value) of observing that t-statistic if there had been no true difference between years is approximately 0.0%. This value is less than the study's pre-determined threshold for statistically significant results (alpha-level of 1.25%); thus the increase in **plastic** is considered to be a true difference. On the other hand, the p-value corresponding to the decrease in **glass** is very large. The chance of observing the 2.7% to 2.1% decrease when the actual proportion had not changed is approximately 31.7% - much too high to be considered a true difference.

E.3.1 Changes in Commercial Waste

In Table A-27, **paper**, **plastic**, **metal**, **organics**, **other materials**, **CDL wastes**, and **hazardous** broad material categories showed a significant change across study periods. The proportions of the **glass** category did not experience a significant increase or decrease.

Table A-27. Changes in Commercial Waste Composition: 1988/89 to 2012

	Mean Ratio (Material Wt/Total Wt)		t-Statistic	p-Value (Cut-off for statistically valid difference = 0.0125)
	1988/89	*2012*		
Paper	**31.9%**	**25.8%**	**2.6425**	**0.0086** *
Plastic	**7.0%**	**12.5%**	**5.7741**	**0.0000** *
Glass	2.7%	2.1%	1.0029	0.3166
Metal	**7.9%**	**3.1%**	**5.1005**	**0.0000** *
Organics	**11.3%**	**30.7%**	**7.4918**	**0.0000** *
Other Materials	**3.1%**	**9.9%**	**4.8288**	**0.0000** *
CDL Wastes	**35.5%**	**10.9%**	**8.1321**	**0.0000** *
Hazardous	**0.6%**	**5.1%**	**2.9891**	**0.0030** *
Number of Samples	*121*	*259*		

Table A-28 illustrates changes in commercial waste composition from 2008 to 2012. The **metal** broad material category significantly changed across the two study periods.

Table A-28. Changes in Commercial Waste Composition: 2008 to 2012

	Mean Ratio (Material Wt/Total Wt)		t-Statistic	p-Value (Cut-off for statistically valid difference = 0.0125)
	2008	*2012*		
Paper	23.7%	25.8%	1.5835	0.1139
Plastic	13.3%	12.5%	0.8676	0.3860
Glass	1.7%	2.1%	1.0640	0.2878
Metal	**5.3%**	**3.1%**	**3.4772**	**0.0005** *
Organics	31.0%	30.7%	0.1549	0.8769
Other Materials	7.7%	9.9%	1.8586	0.0636
CDL Wastes	13.6%	10.9%	1.5198	0.1292
Hazardous	3.8%	5.1%	1.0770	0.2820
Number of Samples	*271*	*259*		

E.3.2 Changes in Self-haul Waste

As illustrated in Table A-29, **plastic**, **metal**, **organics**, **other materials**, and **CDL wastes** showed a significant change across study periods. The proportions of the other three broad material categories did not experience a significant increase or decrease.

Table A-29. Changes in Self-haul Waste Composition: 1988/89 to 2012

	Mean Ratio (Material Wt/Total Wt)		t-Statistic	p-Value (Cut-off for statistically valid difference = 0.0125)	
	1988/89	*2012*			
Paper	7.9%	6.4%	1.1178	0.2643	
Plastic	**3.2%**	**6.2%**	**3.8669**	**0.0001**	*
Glass	1.8%	1.6%	0.2661	0.7903	
Metal	**10.4%**	**5.6%**	**3.1374**	**0.0018**	*
Organics	**27.9%**	**5.2%**	**7.5567**	**0.0000**	*
Other Materials	**7.7%**	**21.6%**	**6.2319**	**0.0000**	*
CDL Wastes	**39.6%**	**51.9%**	**3.2394**	**0.0013**	*
Hazardous	1.6%	1.4%	0.1898	0.8495	
Number of Samples	*217*	*226*			

As shown in Table A-30, none of the proportions of the broad material categories changed significantly between the 2008 and 2012 study periods.

Table A-30. Changes in Self-Haul Waste Composition: 2008 to 2012

	Mean Ratio (Material Wt/Total Wt)		t-Statistic	p-Value (Cut-off for statistically valid difference = 0.0125)
	2008	*2012*		
Paper	5.2%	6.4%	1.0388	0.2995
Plastic	6.8%	6.2%	0.5968	0.5510
Glass	1.7%	1.6%	0.1283	0.8980
Metal	5.4%	5.6%	0.2192	0.8266
Organics	3.0%	5.2%	1.8689	0.0623
Other Materials	18.1%	21.6%	1.2819	0.2006
CDL Wastes	58.3%	51.9%	1.8107	0.0709
Hazardous	1.5%	1.4%	0.0569	0.9546
Number of Samples	*216*	*226*		

F Field Forms

The 2012 field forms are included in the following order:

- Commercial vehicle selection sheet
- Self-haul vehicle selection sheet
- Waste tally sheet

Vehicle Selection Sheet

Tuesday, August 21, 2012

Seattle Commercial Waste Composition Study

SRDS

Sample ID	Sector	Zone	Hauler	Truck No.	Truck Type	Driver	Route	Notes/Biz Names
	COM	4	WM	362945	RL	Joe Mason	A62A	
	COM	4	WM	362945	RL	Joe Mason	A62N	
	COM	2	CS	2006	FL	Davidson, William	220-S	
	COM	2	CS	3051	RL	Paclab, Duke	240-S	
	COM	3	CS	2003	FL	Hernandez, Antonio	220-S	
	COM	3	CS	3022	RL	Davidson, William	240-S	
	COM	2	CS	5005/5006	RO	Kevin Watson/Saad Alshimarys		University Travel Lodge
	COM	2	CS	5005/5006	RO	Kevin Watson/Saad Alshimarys		Simon Properties
	COM	2	CS	5005/5006	RO	Kevin Watson/Saad Alshimarys		Fred Meyers #179
	COM	3	CS	5005/5006	RO	Kevin Watson/Saad Alshimarys		Virginia Mason Hospital
	COM	3	CS	5005/5006	RO	Kevin Watson/Saad Alshimarys		Amgen/Helix
	COM	3	CS	5005/5006	RO	Kevin Watson/Saad Alshimarys		Ocean Beauty Seafood
	COM	4	WM	413029	RO	Donnie Swanstrom		Marine Services Inc
	COM	4	WM	413029	RO	Donnie Swanstrom		Costco
	COM	4	WM	413029	RO	Donnie Swanstrom		Amtrak

SEATTLE SELF-HAUL WASTE COMPOSITION STUDY
Vehicle Selection Form

Site: SRDS

Date: Friday, October 05, 2012

Cross off one number for each vehicle entering the station (**both trucks and passenger vehicles**).

When you reach the number circled, this vehicle should be asked to go to the sorting area to dump its load for sampling.

Continue for each block on the next line until the required number of vehicles is sampled.

SELF-HAUL GARBAGE ONLY

1	2	3	4	5	6	7	8	9	(10)
11	12	13	14	15	16	17	18	19	(20)
21	22	23	24	25	26	27	28	29	(30)
31	32	33	34	35	36	37	38	39	(40)
41	42	43	44	45	46	47	48	49	(50)
51	52	53	54	55	56	57	58	59	(60)
61	62	63	64	65	66	67	68	69	(70)
71	72	73	74	75	76	77	78	79	(80)
81	82	83	84	85	86	87	88	89	(90)
91	92	93	94	95	96	97	98	99	(100)
101	102	103	104	105	106	107	108	109	(110)
111	112	113	114	115	116	117	118	119	(120)
121	122	123	124	125	126	127	128	129	(130)
131	132	133	134	135	136	137	138	139	(140)
141	142	143	144	145	146	147	148	149	(150)
151	152	153	154	155	156	157	158	159	(160)
161	162	163	164	165	166	167	168	169	(170)
171	172	173	174	175	176	177	178	179	(180)

NEED 18 VEHICLES - PLS. SAMPLE EVERY 10TH VEHICLE

Capture Date: _____ Sample Number: _____ Facility: _____

Tally Sheet - Page 1

2012 Seattle Waste Composition Study

PAPER	Newspaper				
	Plain OCC/Kraft				
	Waxed OCC/Kraft				
	Grocery/Shopping Bags				
	High Grade				
	Mixed Low-grade				
	Polycoated Containers				
	Compostable/Soiled				
	Pot. Comp. Single-use Food Service				
	Non-Comp. Single-use Food Service				
	Mixed/Other Paper				

PLASTIC	#1 PET Bottles				
	#2 HDPE Natural Bottles				
	#2 HDPE Colored Bottles				
	Other Bottles				
	Tubs				
	Expanded Poly. Nonfood				
	Expanded Poly. Food grade				
	Rigid Poly. Foam Insulation				
	Pot. Comp. Single-use Food Service				
	Non-Comp. Single-use Food Service				
	Other Rigid Packaging				
	Clean Shopping/Dry Cleaning Bags				
	Stretch Wrap				
	Other Clean PE Film				
	Other Film				
	Plastic Pipe				
	Foam Carpet Padding				
	Durable Plastic Products				
	Plastic/Other Materials				

METAL	Alum. Cans				
	Alum. Foil/Containers				
	Other Aluminum				
	Other Nonferrous				
	Steel Food Cans				
	Empty Aerosol Cans				
	Other Ferrous				
	Oil filters			Filter Count:	
	Mixed Metals/Material				

GLASS	Clear Bottles				
	Green Bottles				
	Brown Bottles				
	Container Glass				
	Fluorescent Tubes				
	CFLs				
	Flat Glass				
	Automotive Glass				
	Other Glass				

ALL SAMPLE VEHICLES

VEHICLE TYPE

A - Auto (Car or SUV)
P - Pickup Trucks
V - Van
T - Other Truck
RL - Rear Loader
FL - Front Loader
SL - Side Loader
ROD - Loose Roll-Off
ROC - Compactor Roll-Off

GENERATOR TYPE

Percent SF _____
Percent MF _____
Percent COM _____
100%

If COM, what type of bus.?
A - Manufacturing
B - Wholesale
C - Retail
D - Restaurant
E - Hotel/Motel
F - Office
G - Health Care
H - Education
I - Transportation
J - Other Services
K - Mixed Businesses
L - CDL
M - Other Non-residential
N - Homeowner Box

COMMERCIAL HAULERS

Clean Scapes **Waste Management**

TRUCK #: **ROUTE #:**

AREA: **LOAD #:**

SELF-HAUL VEHICLES

ACCOUNT? **YES** **NO**

Vehicle 1	**LICENSE PLATE:**
	ORIGIN ADDRESS:
	PERCENT SORTED: or NET WEIGHT:
Vehicle 2	**LICENSE PLATE:**
	ORIGIN ADDRESS:
	PERCENT SORTED: or NET WEIGHT:
Vehicle 3	**LICENSE PLATE:**
	ORIGIN ADDRESS:
	PERCENT SORTED: or NET WEIGHT:

COMPANY NAME:

Tally Sheet - Page 2

ORGANICS	Leaves & Grass				
	Prunings				
	Food				
	Fats/Oils/Grease				
	Textiles/Clothing				
	Mixed Textiles				
	Disposable Diapers				
	Animal By-products				
	Rubber Products				
	Tires				

CONSTRUCTION DEBRIS	Clean Dimension Lumber				
	Clean Engineered Wood				
	Pallets				
	Crates				
	Other Untreated Wood				
	New Painted Wood				
	Old Painted Wood				
	Creosote-Treated Wood				
	Other Treated Wood				
	Contaminated Wood				
	New Gypsum Scrap				
	Demo Gypsum Scrap				
	Carpet				
	Felt Carpet Pad				
	Fiberglass Insulation				
	Concrete				
	Asphalt Pavings				
	Other Aggregates				
	Rock				
	Asphalt Shingles				
	Other Asphaltic Roofing				
	Ceramics				
	Cement Fiber Board				
	Dried Latex Paints				
	Single-Ply Roofing Membranes				
	Ceiling Tiles				
	Other Construction Debris				

FURNITURE, APPLIANCES, AND ELECTRONICS	Furniture				
	Mattresses				
	Small Appliances				
	Cell Phones				
	Audio/Visual Equipment				
	CRT Computer Monitors				
	CRT Televisions				
	Other Electronics				

POTENTIALLY HARMFUL WASTE	Liquid Latex Paint				
	Solvent-based Adhesives				
	Water-based Adhesives				
	Oil-based Paint/Thinners				
	Caustic Cleaners				
	Pesticides/Herbicides				
	Rechargeable Batteries				
	Other Dry-cell Batteries				
	Wet-cell Batteries				
	Gasoline/Kerosene				
	Motor Oil/Diesel Oil				
	Asbestos				
	Explosives				
	Medical Wastes				
	Other Cleaners/Chemicals				
	Other Potentially Harmful				

MISC.	Sand/Soil/Dirt				
	Non-distinct Fines				
	Misc. Organics				
	Misc. Inorganics				

CAPTURE DATE SAMPLE NUMBER

FACILITY TIME

Revised 3-5/12