Metro Nashville and Davidson County, TN Waste Stream and Recycling Characterization Study

Contracted by:

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Prepared by:

CDM Smith

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Appendices

Appendix A – Work Plan

Appendix B – Tabulated Sample Data - Summer 2017 Event

Appendix C – Tabulated Sample Data - Fall 2017 Event

Appendix D – Photographs of Sorting Events

Executive Summary

Project Tasks and Objectives

The Metro Nashville Public Works and Tennessee Department of Environment & Conservation commissioned CDM Smith to develop the Waste Stream and Recycling Characterization Study to support the 30-year Solid Waste Plan for Davidson County, Tennessee. Composition estimates for landfilled Municipal Solid Waste (MSW) generated within Nashville and Davidson County were developed as well as composition estimates of recovered materials.

The following tasks and objectives outline the activities that were conducted as a part of this Study:

- For Davidson County differentiate and compare MSW composition of defined material categories disposed from the Residential and Industrial/Commercial/Institutional (ICI).
- For Davidson County differentiate and compare MSW composition of defined material categories generated and disposed from the Urban Services District (USD) and General Services District (GSD) areas by residential and ICI sectors.
- For Davidson County differentiate and compare MSW composition of defined material categories generated and disposed from the Metro collected waste and Private hauler serviced areas by residential and ICI sectors.
- For Davidson County differentiate and compare recovered material composition of defined material categories disposed from the Residential and ICI.
- For Davidson County differentiate and compare recovered material composition of defined material categories generated and disposed from the USD and GSD areas by residential and ICI sectors.
- For Davidson County differentiate and compare recovered material composition of defined material categories generated and disposed from the Metro collected waste and Private hauler serviced areas by residential and ICI sectors.

Methodology

Davidson County currently has two transfer stations one single-stream material recovery facility (MRF) that service the USD and GSD in Davidson County. **Figure 1** shows the transfer stations and MRF in Davidson county and identifies the USD and GSD areas. CDM Smith conducted the two-season sampling event, sorting samples for one week at each of the facilities in July and October 2017. A Work Plan was developed for the study to comply with the industry standards for conducting waste characterization studies and the American Society for Testing Materials (ASTM) D5231 for sample size. This plan was developed to ensure that the samples collected were representative of Davidson County's waste stream. After the samples were collected they were sorted into material categories and weighed.

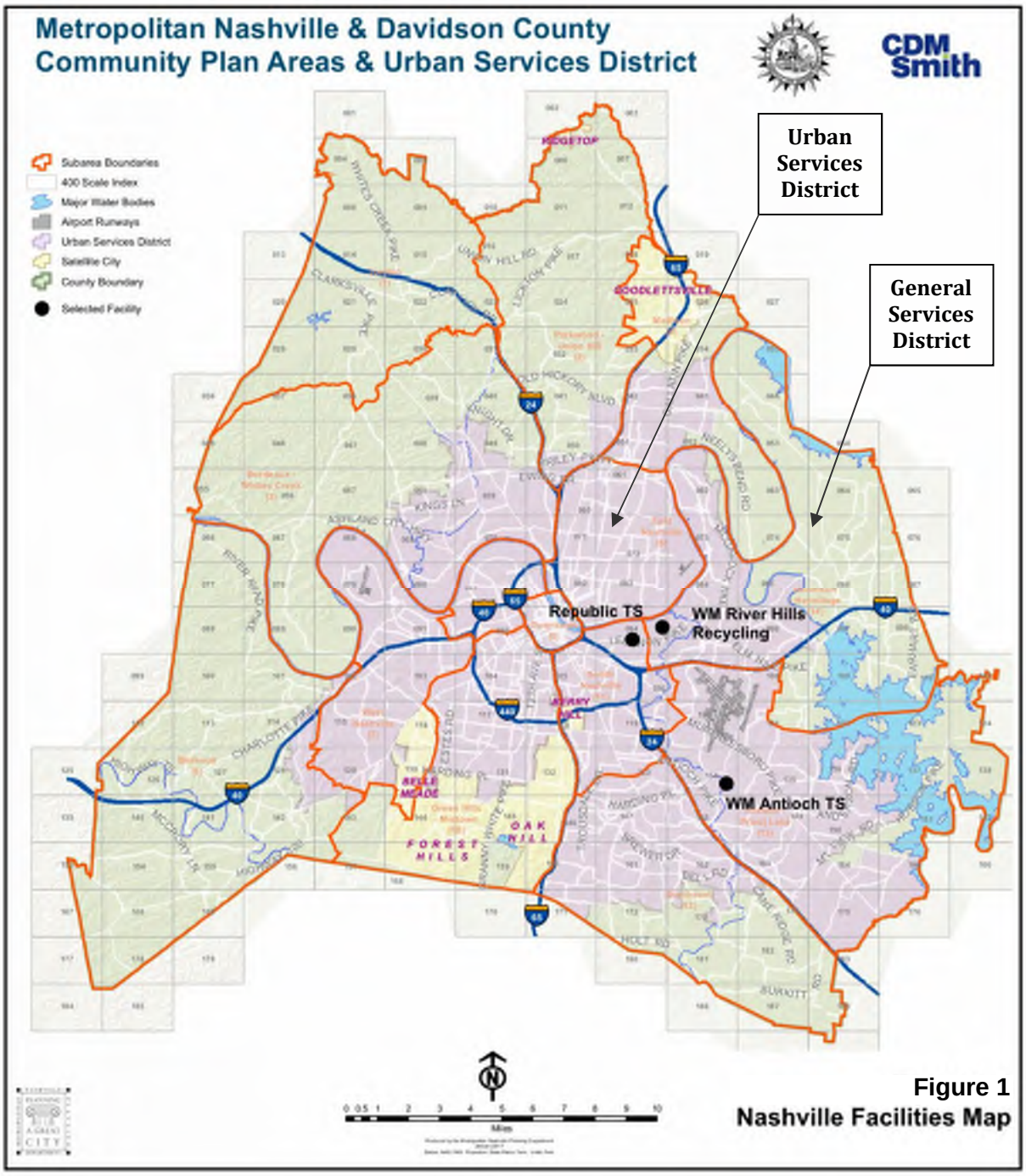


Figure 1
Nashville Facilities Map

The samples were sorted into 10 material classes; Paper, Beverage Containers, Plastics, Glass, Metals, Organics, C&D, Inorganics, Household Hazardous Waste (HHW), and Textiles. Materials within these classes were further separated into 50 individual material categories as shown in Section 1.2.3.

Principal Findings

MSW Characterization

Overall, a total of 192 waste samples were hand-sorted and characterized. The overall goal of the two-season study for sample distribution between Metro trucks and private trucks was 25% Metro and 75% privates for the MSW sorts and the sampling split would be approximately 50/50 between residential and ICI sectors. Of the 192 samples processed, 96 (50%) were samples of commercial waste (ICI), and 96 (50%) were samples of residential waste; 78% were samples from USD areas and 22% were samples from GSD areas; and 26% of the samples were from Metro routes and 74% were from private routes. **Table 1** summarizes the summer and fall samples combined that were used to determine the landfilled MSW composition.

Table 1. Number of Landfilled Samples by Waste Sector

Sampling Group	Sample Count		Total Sample Wt.
	No.	%	(pounds)
Residential	96	50%	20,586
USD	*67*	*69.8%*	*13,899*
GSD	*29*	*30.2%*	*6,687*
ICI	96	50%	21,551
USD	*83*	*86.5%*	*18,662*
GSD	*13*	*13.5%*	*2,888*
Total Res/ICI	**192**	**100%**	**42,136**

Landfilled MSW Composition

Figure 2 shows the percentage, by weight, of each of the nine material classes for the combined residential and ICI MSW sectors. Paper, Organics, and Plastics account for approximately 66% (26.3%, 22.9%, and 16.4%, respectively) of the landfilled combined residential/ICI MSW.

Figure 2. Composition of Landfilled Combined Residential/ICI MSW by Material Class

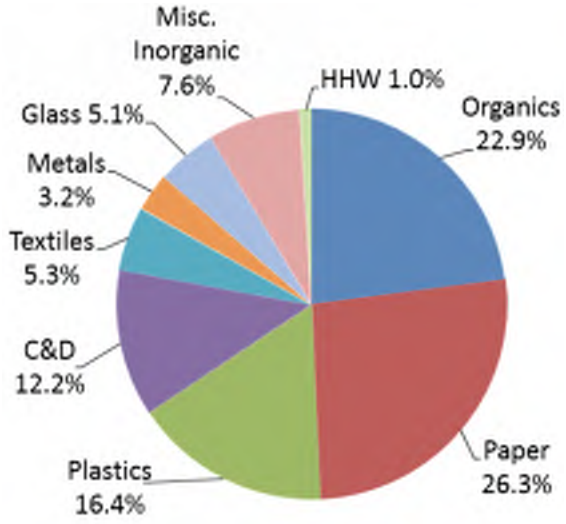


Table 2 lists the top ten material categories that were found in the landfilled combined residential/ICI MSW. These ten categories account for approximately 66% of landfilled residential/ICI MSW. Food Scraps, Construction and Demolition materials, and Compostable Paper and 'other' paper material categories account for 36.9% (15.4%, 12.2%, and 9.3%, respectively) of landfilled residential/ICI MSW.

Table 2. Top Ten Individual Material Categories in Landfilled Combined Residential/ICI MSW

Category	Waste Composition %	Cum. %
Food Scraps	15.4%	15.4%
Construction and Demolition materials	12.2%	27.6%
Compostable Paper and 'other' paper	9.3%	36.9%
Uncoated OCC	7.9%	44.8%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.1%	50.9%
Clothing and other textiles	4.7%	55.7%
Boxboard	3.2%	58.9%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.6%	61.5%
Other Film	2.3%	63.8%
Diapers	2.3%	66.1%
Total	**66.1%**	

Summing the recoverable materials categories from Papers, Plastics, Glass, and metals as defined in this study's material categories, the summer sort data indicates 30.3% of the landfilled materials were recoverable.

Recovered Materials Characterization

Overall, a total of 93 recovered materials samples were hand-sorted and characterized. The overall goal of the two-season study for sample distribution between Metro trucks and private trucks was 75% Metro and 25% privates for the MRF sorts and the sampling split would be approximately 50/50 between residential and ICI sectors. **Table 3** summarizes the summer and fall samples combined that were used to determine the recovered materials composition. Of the 93 samples processed, 40 (43%) were samples of commercial waste (ICI), and 53 (57%) were samples of residential waste; 81% were samples from USD areas and 19% were samples from GSD areas; and 53% of the samples were from Metro routes and 47% were from private routes.

Table 3. Number of Recovered Samples by Waste Sector

Sampling Group	Sample Count		Total Sample Wt.
	No.	%	(pounds)
Residential	53	57%	12,245
USD	*42*	*79.2%*	*9,751*
GSD	*11*	*20.8%*	*2,493*
ICI	40	43%	9,630
USD	*33*	*82.5%*	*7,958*
GSD	*7*	*17.5%*	*1,672*
Total Res/ICI	**93**	**100%**	**21,874**

Figure 3 shows the percentage, by weight, of each of the nine material classes for the combined recovered residential and ICI materials sectors. Paper, Plastics, and Metals account for approximately 92% (78.0%, 10.5%, and 3.3%, respectively) of the recovered combined residential/ICI materials.

Figure 3. Composition of Recovered Residential/ICI Materials by Material Class

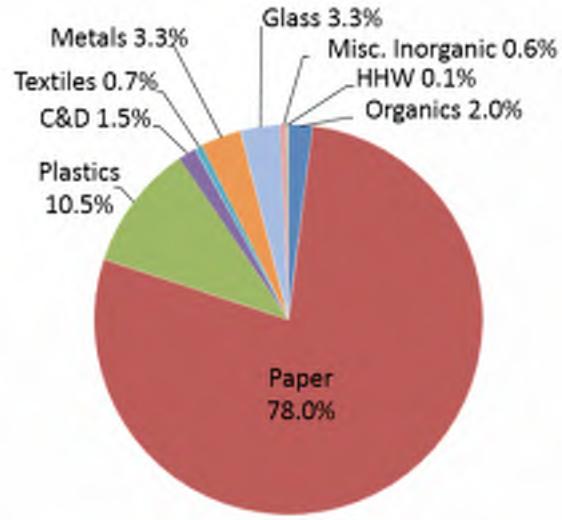


Table 4 lists the top ten material categories that were found in the recovered combined residential/ICI materials. These ten categories account for approximately 82% of recovered combined residential/ICI materials. Uncoated OCC, Magazines/Catalogs, and Newsprint material categories account for 55.3% (37.6%, 9.7%, and 8%, respectively) of recovered combined residential/ICI materials.

Table 4. Top Ten Individual Material Categories in Recovered Residential/ICI Materials

Category	Waste Composition %	Cum. %
Uncoated OCC	37.6%	37.6%
Magazines/Catalogs	9.7%	47.3%
Newsprint	8.0%	55.3%
Boxboard	7.7%	63.0%
High Grade Office Paper	5.3%	68.3%
Mixed Paper - Recyclable	5.0%	73.3%
#1 PET Bottles/Jars	3.0%	76.2%
Compostable Paper and 'other' paper	2.8%	79.0%
Kraft	1.6%	80.6%
Construction and Demolition materials	1.5%	82.1%
Total	**82.1%**	

Section 1
Landfilled MSW Characterization Summer Sampling Event

1.1 Objective

This section develops composition estimates for landfilled Municipal Solid Waste (MSW) generated within Nashville and Davidson County. All of the results in this section were generated from waste samples taken at the Republic Transfer Station and Waste Management Transfer Station.

The following sections discuss the methodology used to obtain representative MSW composition estimates. This includes the study parameters, the number and allocation of samples, the solid waste facilities where sampling activities were conducted, and the basis for selecting waste samples. Sampling activities were completed in accordance with CDM Smith's Work Plan, dated July 2017 (**Appendix A**). The goal of the of the two-season study was to sort and characterize 200 samples of waste from the residential (mostly houses and small apartment buildings) and industrial/commercial/institutional (ICI) sectors of MSW. Sampling was planned to be equally split between residential and ICI sectors (50/50).

1.2 Methodology

This section presents the data collection methods and calculation procedures used in this study.

1.2.1 Sample Allocation

Sampling was conducted two transfer stations. The transfer stations service both USD Services District (USD) and General Services District (GSD) communities in Davidson County, as shown on **Figure 1-1**. The goal of the two-season study for sample distribution between Metro trucks and private trucks was 25% Metro and 75% privates for the MSW sorts. During the summer 2017 sampling event, sample distribution was 22.6% Metro and 77.4% private.

The number of samples conducted at each site was maximized to the extent possible with the allocated field staff; however, the number varied based on the number of loads available that particular day, site conditions, site staff assistance, weather conditions, the time that loads were delivered to the site, and a number of other factors. Samples collected as part of the MSW characterization were generally allocated equally between the residential and ICI sectors.

CDM Smith conducted the summer 2017 sampling event over 10 days between July 17, 2017 and July 28, 2017. A total of 93 samples were sorted from the residential and ICI sectors to develop comprehensive countywide MSW composition.

Figure 1-1. Nashville/Davidson County Facilities Map

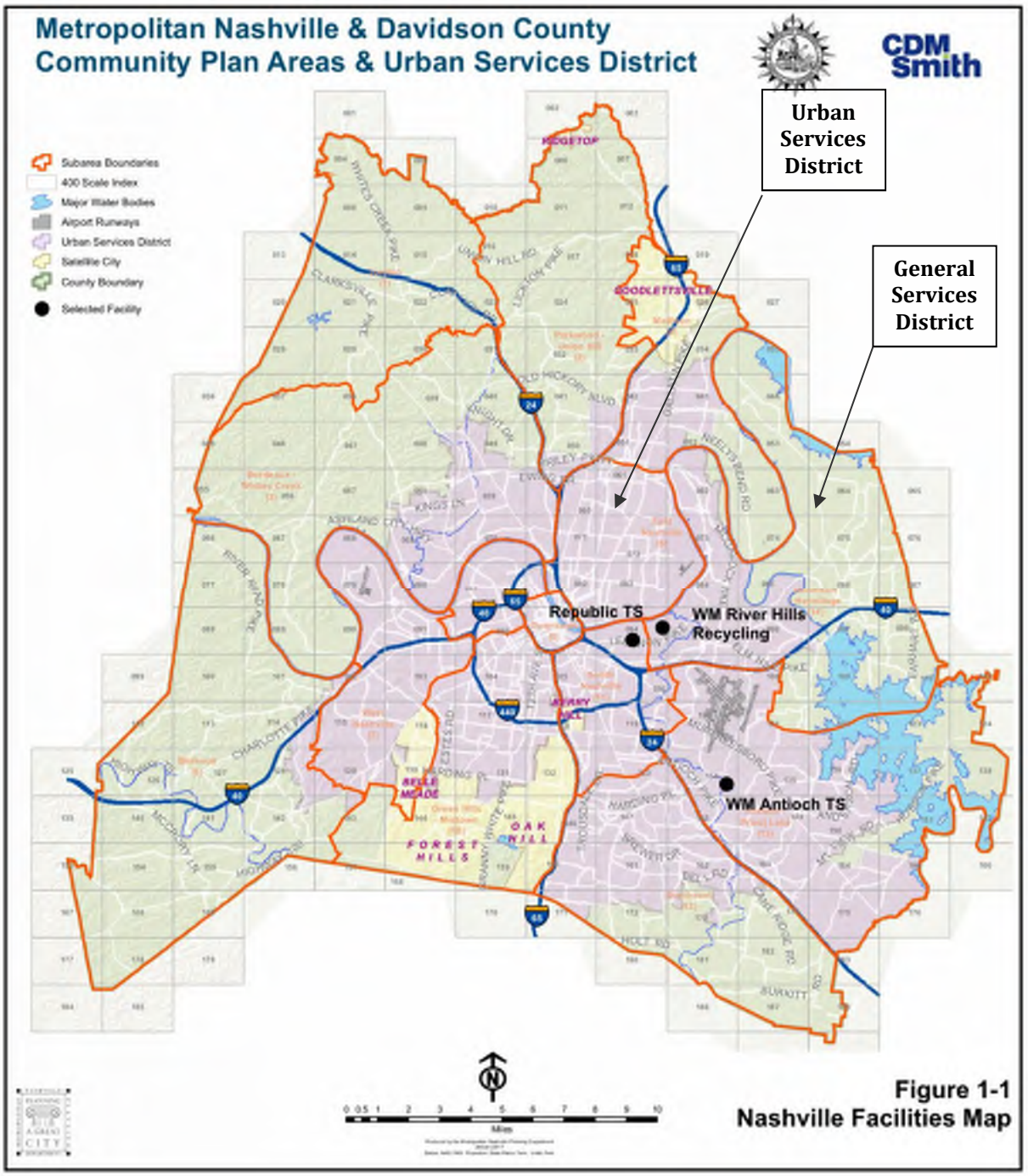


Table 1-1 summarizes the samples that were used to determine the landfilled MSW composition. A total of 93 waste samples were collected from the residential and commercial waste sectors in Summer 2017. Of the 93 samples collected, 44 (47%) were samples of commercial waste (ICI), and 49 (53%) were samples of residential waste, of those samples a total of 70 (75%) were samples from USD areas and 23 (25%) were samples from GSD areas. **Figure 1-2** illustrates the geographic distribution and waste sectors sampled during the summer 2017 event.

Table 1-1. Number of Landfilled Samples by Waste Sector - Summer

Sampling Group	Sample Count		Total Sample Wt.	Mean Sample Wt.
	No.	%	(pounds)	
Residential	49	100%	9,775	199.5
USD	*34*	*69.4%*	*6,470*	*190.3*
GSD	*15*	*30.6%*	*3,305*	*220.3*
ICI	44	100%	9,799	222.7
USD	*36*	*81.8%*	*8,009*	*222.5*
GSD	*8*	*18.2%*	*1,790*	*223.8*
Total Res/ICI	**93**	**100%**	**19,574**	**210.5**

1.2.2 Sampling Plan

CDM Smith contacted the facilities for permission to conduct the sampling activities and to coordinate with the site managers. CDM Smith requested information to determine the relative mix of waste sectors that are disposed at each facility. From this information, CDM Smith constructed a sampling plan for the selection of vehicles at each facility. The sampling plan was developed to comply with the industry standards for conducting waste characterization studies and the American Society for Testing and Materials (ASTM) standard D5231 for samples size. All work was completed in general accordance with the approved Work Plan.

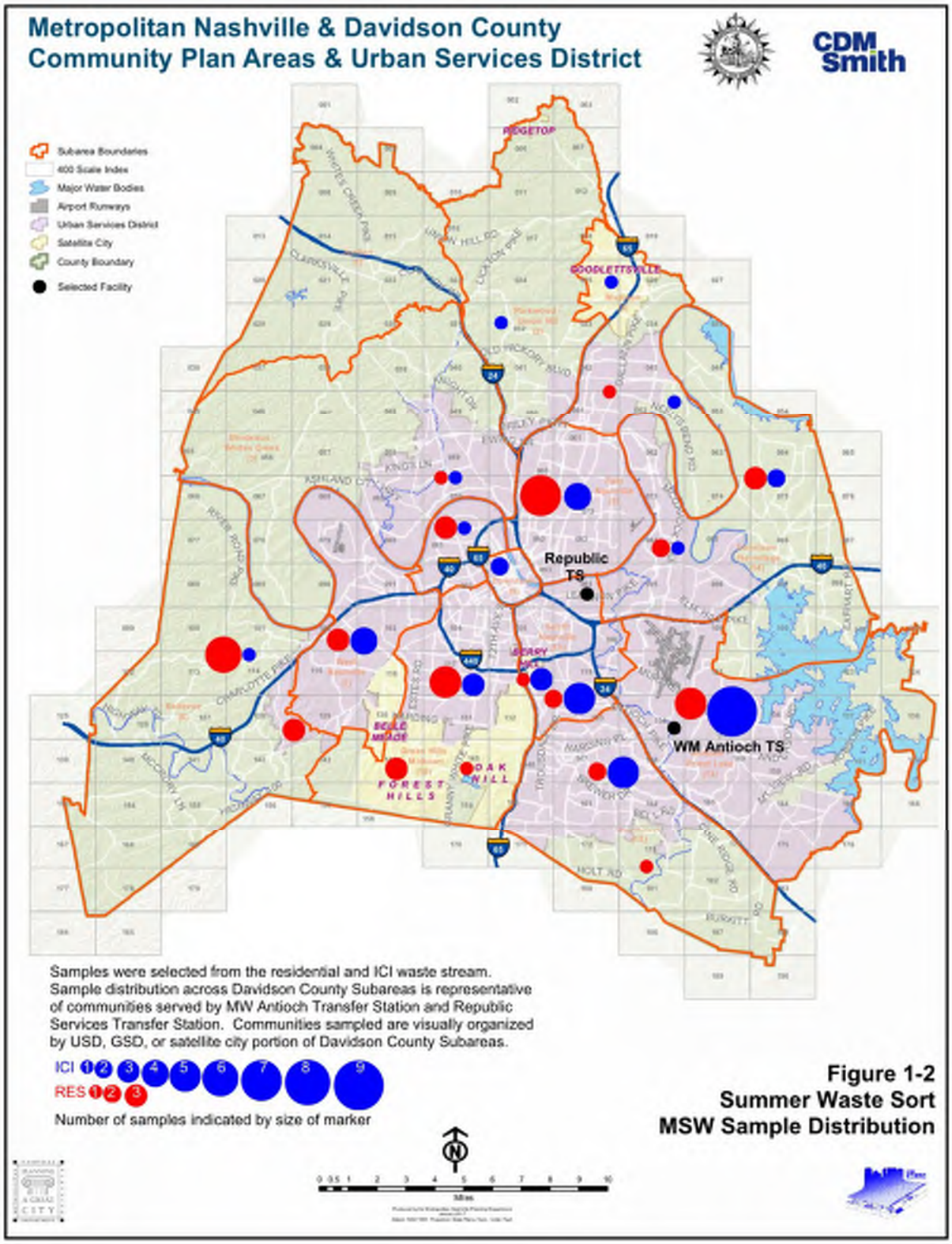
1.2.3 Data Collection Procedures

Site staff were consulted to assist CDM Smith in the selection of samples and in the gatehouse surveys that were used to determine the mix of waste disposed in Davidson County. Selected vehicles were tipped in a designated location and samples were collected from a randomly selected portion of each tipped pile. The samples consisted of approximately 200 to 300 pounds of waste that were sorted into nine material classes; Paper, Plastics, Glass, Metals, Organics, C&D, Inorganics, Household Hazardous Waste (HHW), and Textiles. Materials within these classes were further separated into 50 individual material categories (definitions are provided in **Appendix A**):

1. **Paper** – Newsprint, High Grade Office Paper, Magazines/Catalogs, Uncoated OCC, Kraft, Boxboard, Mixed Paper - Recyclable, Compostable Paper, Other Paper, Milk and Juice cartons/boxes; *contaminated paper logged under organics

2. **Plastics** - #1 PET Bottles/Jars, #1 Other PET Containers & Packaging, #2 HDPE Bottles/Jars - Clear, #2 HDPE Bottles/ Jars - Color, #2 Other HDPE Containers & Packaging, #6 Expanded Polystyrene Packaging (EPS), #3-#7 Other – All, Other Rigid Plastic Products, Grocery & Merchandise Bags, Trash Bags, Commercial & Industrial Film, Other Film, Remainder/ Composite Plastic;

Figure 1-2. Summer 2017 MSW Sample Distribution



3. **Glass** - Recyclable clear, brown, green, and blue Glass Bottles and Jars, Flat Glass, Other Glass;

4. **Metals** - Aluminum Beverage Containers, Other Aluminum, Ferrous containers (tin cans), Aerosol cans, Other Ferrous, Other Non-Ferrous, Other Metal;

5. **Organics** - Yard Waste - Compostable, Yard Waste - Woody, Food Scraps, Bottom Fines and Dirt, Diapers, Other Organic; *contaminated paper logged under organics

6. **C&D** - Clean Dimensional Lumber, Clean Engineered Wood, Wood Pallets, Painted Wood, Treated Wood, Concrete, Reinforced Concrete, Asphalt Paving, Rock & Other Aggregates, Bricks, Gypsum Board, Composition Shingles, Other Roofing, Plastic C&D materials, Ceramics/Porcelain, Other C&D;

7. **Inorganics** – Televisions, Computer Monitors, Computer Equipment/ Peripherals, Electronic Equipment, White Goods - refrigerated, White Goods - not refrigerated, Lead-acid Batteries, Other Household Batteries, Tires, Household Bulky Items, Fluorescent Lights/Ballasts;

8. **HHW** - Latex Paint, Oil Paint, Plant/Organism/Pest Control/Growth, Used Oil/Filters, Other Automotive Fluids, Mercury-Containing Items, Sharps & Infectious Waste, Ash, Sludge, & Other Industrial Processed Wastes, Sewage Solids, Other HHW; and

9. **Textiles** – Carpet, Carpet Padding, Clothing, Other Textiles.

After the samples were sorted each material category was weighed. Weight and load information associated with each sample were recorded on the Hand Sort Characterization Form provided in the Work Plan. Sample information and sample weights are provided in **Appendix B**.

1.2.4 Calculation Procedures

The approach to developing the waste composition estimates in this report was to calculate the percent composition of each material in the waste sectors as outlined in the Work Plan. All composition results presented in this report were calculated at a 90% confidence interval. This means that there is a 90% probability that the material is between the mean percentage value plus or minus the confidence interval. For example, there is a 90% probability that the overall Residential/ICI Davidson County MSW composition of newsprint is between 0.78% and 1.02% (0.9% plus or minus 0.12%). Section 3 of the Work Plan (**Appendix A**) provides detail and equations for the composition profiles.

1.3 MSW Characterization Results

The MSW characterization results from the summer 2017 event are provided in this section. **Table 1-1** summarizes the sample information for each of the study's sampling groups and sectors. The goal for this event was to characterize 100 samples with a sample size of between 200 and 300 lbs (ASTM D5231). During the summer 2017 event, 93 waste samples were selected and hand sorted at the two TS facilities in Davidson County. The sample sizes and numbers were within the Work Plan goals. The average sample weight for the 93 samples was 210 pounds. A

total of 19,574 pounds of MSW was sorted and classified during the summer 2017 sampling event.

Sampling was planned to be equally split between residential and ICI sectors (50/50) and distribution between Metro trucks and private trucks at an approximate mix of 25% Metro to 75% private haulers for MSW sorts.

CDM Smith conducted the summer 2017 sampling event, over 10 days between July 17, 2017 and July 28, 2017. A total of 93 waste samples were hand-sorted and characterized. Extremely high temperatures of greater than 100 degrees during multiple days of the sampling event may have impacted attaining the goal of processing 100 samples during the summer event. More significantly, the sample team was not allowed access to our work area for several hours due to hauler scheduling issues which rendered the area not safe for our sorting activities.

In the following sections, the landfilled MSW composition results are presented for the ICI and residential waste sectors. The combined residential/ICI composition was determined by weighting the ICI and residential sampling results by using the ratio of residential to ICI MSW determined by the gatehouse surveys. A gatehouse survey was conducted each day of sampling and provides the basis of determination of Davidson County's mix of residential to ICI waste. During the two-week summer sampling event, approximately 33% of the trucks passing through the transfer stations were from the residential waste stream and 67% were from the ICI waste stream. These ratios were applied to estimate the Combined Residential/ICI MSW Compositions.

Each composition profile is presented as follows:

- A pie chart depicting the nine material classes by weight (i.e., Paper, Plastic, Organics, Textiles, Glass, C&D, Metal, Inorganics, and HHW);
- A list of the ten largest material categories by weight (e.g., Food Scraps, High Grade Office Paper, Televisions, etc.), where waste composition percentages are rounded to the nearest tenth and cumulative totals represent the sum of unrounded results;
- A comprehensive table detailing the full composition results for the entire 50 material categories.

1.3.1 Landfilled Residential MSW Composition

Figure 1-3 shows the percentage, by weight, of each of the nine material classes for the landfilled residential MSW sector. Organics, Paper, and Plastics account for over 69% (33.0%, 20.9%, and 15.3%, respectively) of the landfilled residential MSW for this sector.

Figure 1-3. Composition of Landfilled Residential MSW by Material Class - Summer

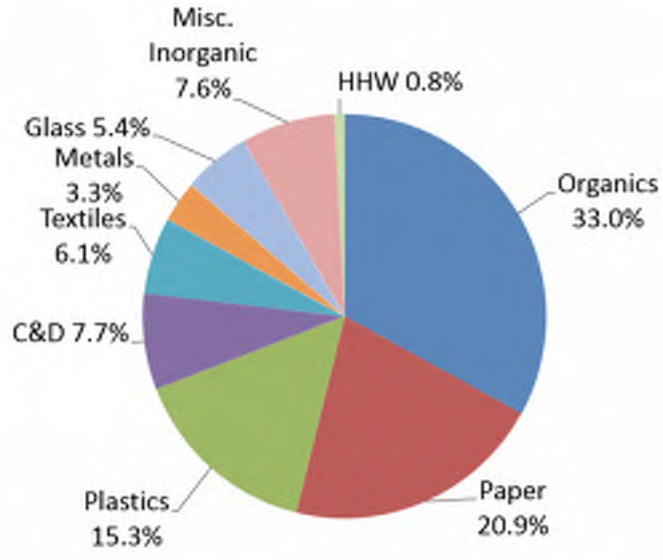


Table 1-2 lists the top ten material categories that were found in the landfilled residential MSW sector. These ten categories account for approximately 67% of landfilled residential MSW. Food Scraps, Compostable Paper and 'other' paper, and Construction and Demolition materials material categories account for 39.1% (22.6%, 8.9%, and 7.7%, respectively) of landfilled residential MSW.

Table 1-2. Top Ten Individual Material Categories in Landfilled Residential MSW - Summer

Category	Waste Composition %	Cum. %
Food Scraps	22.6%	22.6%
Compostable Paper and 'other' paper	8.9%	31.4%
Construction and Demolition materials	7.7%	39.1%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.3%	45.4%
Clothing and other textiles	6.0%	51.3%
Diapers	3.9%	55.2%
Other Organic	3.2%	58.4%
Uncoated OCC	3.1%	61.5%
Glass Bottles and Jars - clear	3.1%	64.6%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.7%	67.3%
Total	**67.3%**	

Table 1-3 provides a composition profile of landfilled residential MSW.

Table 1-3. Composition Profile of Landfilled Residential MSW

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**20.9%**	**2.14%**
	Newsprint	1.6%	0.57%
	High Grade Office Paper	1.2%	0.55%
	Magazines/Catalogs	0.9%	0.28%
	Uncoated OCC	3.1%	1.02%
	Kraft	0.2%	0.15%
	Boxboard	2.1%	0.41%
	Mixed Paper - Recyclable	2.7%	0.43%
	Compostable Paper and 'other' paper	8.9%	1.00%
	Milk and Juice cartons/boxes, coated	0.2%	0.06%
Plastics		**15.3%**	**1.18%**
	#1 PET Bottles/Jars	2.4%	0.32%
	#1 Other PET Containers & Packaging	0.3%	0.09%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.09%
	#2 HDPE Bottles/ Jars - Color	0.4%	0.11%
	#2 Other HDPE Containers & Packaging	0.2%	0.13%
	#6 Expanded Polystyrene Packaging (EPS)	1.0%	0.14%
	#3-#7 Other - All	2.1%	0.26%
	Other Rigid Plastic Products	1.8%	0.69%
	Grocery & Merchandise Bags	1.0%	0.15%
	Trash Bags	1.5%	0.17%
	Commercial & Industrial Film	0.3%	0.28%
	Other Film	2.5%	0.29%
	Remainder/ Composite Plastic	1.3%	0.39%
Glass		**5.4%**	**0.91%**
	Glass Bottles and Jars - clear	3.1%	0.56%
	Glass Bottles and Jars - brown	1.5%	0.37%
	Glass Bottles and Jars - green	0.8%	0.30%
	Glass Bottles and Jars - blue	0.1%	0.05%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**7.6%**	**3.60%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.30%
	Electronic Equipment	1.1%	0.63%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.3%	3.12%
Organics		**33.0%**	**3.66%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.7%	1.38%
	Yard Waste - Woody; branch >0.5"	0.1%	0.10%
	Food Scraps	22.6%	2.76%
	Bottom Fines and Dirt	0.5%	0.43%
	Diapers	3.9%	0.96%
	Other Organic	3.2%	1.38%
Metals		**3.3%**	**0.52%**
	Aluminum Beverage Containers	0.9%	0.21%
	Other Aluminum	0.3%	0.08%
	Ferrous containers (bi-metal cans)	1.0%	0.18%
	Aerosol cans	0.3%	0.08%
	Other Ferrous	0.5%	0.29%
	Other Non-Ferrous	0.0%	0.05%
	Other Metal	0.3%	0.26%
Textiles		**6.1%**	**1.43%**
	Carpet and carpet padding	0.2%	0.19%
	Clothing and other textiles	6.0%	1.37%
HHW		**0.8%**	**0.29%**
	Household Hazardous Waste materials	0.8%	0.29%
C&D		**7.7%**	**3.95%**
	Construction and Demolition materials	7.7%	3.95%
Total Percentage		100.0%	

1.3.2 Landfilled ICI MSW Composition

Figure 1-4 shows the percentage, by weight, of each of the nine material classes for the landfilled ICI MSW sector. Paper, C&D, and Plastics account for approximately 63% (27.3%, 18.8%, and 16.6%, respectively) of the landfilled MSW for this sector.

Figure 1-4. Composition of Landfilled ICI MSW by Material Class - Summer

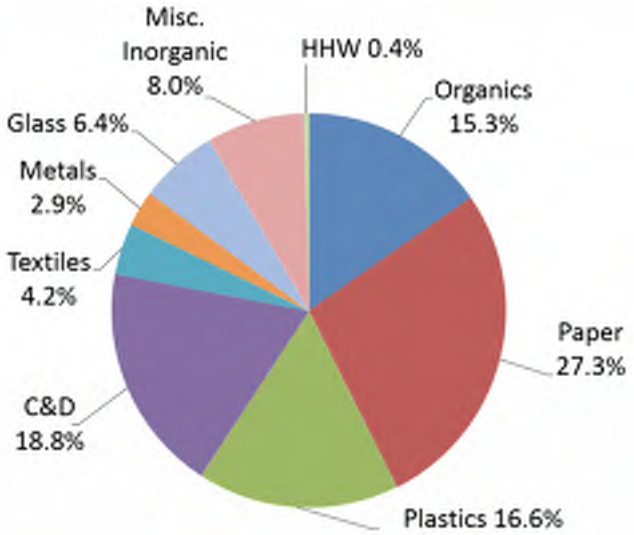


Table 1-4 lists the top ten material categories that were found in the landfilled ICI MSW sector. These ten categories account for approximately 71% of landfilled ICI MSW. Construction and Demolition materials, Uncoated OCC, and Food Scraps material categories account for 40.2% (18.8%, 11.5%, and 9.9%, respectively) of landfilled ICI MSW.

Table 1-4. Top Ten Individual Material Categories in Landfilled ICI MSW - Summer

Category	Waste Composition %	Cum. %
Construction and Demolition materials	18.8%	18.8%
Uncoated OCC	11.5%	30.3%
Food Scraps	9.9%	40.2%
Compostable Paper and 'other' paper	9.8%	50.1%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.7%	56.8%
Clothing and other textiles	4.2%	60.9%
Commercial & Industrial Film	2.6%	63.5%
Remainder/ Composite Plastic	2.5%	66.0%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.3%	68.3%
Other Film	2.2%	70.6%
Total	**70.6%**	

Table 1-5 provides the composition profile of the landfilled ICI MSW sector.

Table 1-5. Composition Profile of Landfilled ICI MSW

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**27.3%**	**4.95%**
	Newsprint	0.5%	0.22%
	High Grade Office Paper	1.0%	0.81%
	Magazines/Catalogs	0.6%	0.25%
	Uncoated OCC	11.5%	2.36%
	Kraft	0.7%	0.63%
	Boxboard	1.6%	0.38%
	Mixed Paper - Recyclable	1.4%	0.43%
	Compostable Paper and 'other' paper	9.8%	4.30%
	Milk and Juice cartons/boxes, coated	0.1%	0.04%
Plastics		**16.6%**	**3.07%**
	#1 PET Bottles/Jars	1.3%	0.32%
	#1 Other PET Containers & Packaging	0.2%	0.08%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.07%
	#2 HDPE Bottles/ Jars - Color	0.7%	0.78%
	#2 Other HDPE Containers & Packaging	0.1%	0.08%
	#6 Expanded Polystyrene Packaging (EPS)	1.4%	0.82%
	#3-#7 Other - All	1.3%	0.31%
	Other Rigid Plastic Products	1.7%	0.91%
	Grocery & Merchandise Bags	0.6%	0.19%
	Trash Bags	1.7%	0.52%
	Commercial & Industrial Film	2.6%	1.71%
	Other Film	2.2%	0.55%
	Remainder/ Composite Plastic	2.5%	1.55%
Glass		**6.4%**	**3.62%**
	Glass Bottles and Jars - clear	1.7%	0.58%
	Glass Bottles and Jars - brown	1.2%	0.58%
	Glass Bottles and Jars - green	1.3%	1.36%
	Glass Bottles and Jars - blue	0.1%	0.13%
	Flat Glass	2.1%	3.36%
	Other Glass	0.0%	0.06%

		Mean	+/-
Misc. Inorganic		**8.0%**	**3.96%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.18%
	Electronic Equipment	1.2%	0.59%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.7%	3.76%
Organics		**15.3%**	**3.17%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.3%	1.66%
	Yard Waste - Woody; branch >0.5"	0.0%	0.03%
	Food Scraps	9.9%	2.52%
	Bottom Fines and Dirt	1.2%	0.84%
	Diapers	0.8%	0.41%
	Other Organic	1.0%	0.48%
Metals		**2.9%**	**0.91%**
	Aluminum Beverage Containers	0.6%	0.17%
	Other Aluminum	0.2%	0.06%
	Ferrous containers (bi-metal cans)	0.4%	0.12%
	Aerosol cans	0.1%	0.04%
	Other Ferrous	0.9%	0.61%
	Other Non-Ferrous	0.3%	0.17%
	Other Metal	0.6%	0.44%
Textiles		**4.2%**	**2.68%**
	Carpet and carpet padding	0.0%	0.01%
	Clothing and other textiles	4.2%	2.68%
HHW		**0.4%**	**0.18%**
	Household Hazardous Waste materials	0.4%	0.18%
C&D		**18.8%**	**6.81%**
	Construction and Demolition materials	18.8%	6.81%
Total Percentage		100.0%	

1.3.3 Landfilled Combined Residential/ICI MSW Composition

Figure 1-5 shows the percentage, by weight, of each of the nine material classes for the combined residential and ICI MSW sectors. Paper, Organics, and Plastics account for approximately 63% (25.2%, 21.2%, and 16.2%, respectively) of the landfilled combined residential/ICI MSW.

Figure 1-5. Composition of Landfilled Combined Residential/ICI MSW by Material Class - Summer

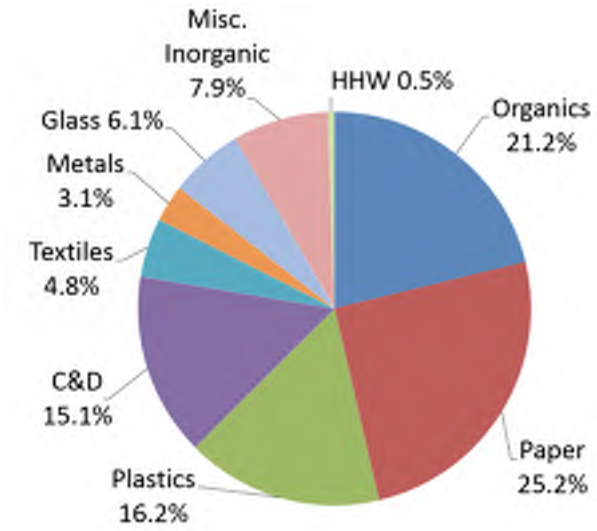


Table 1-6 lists the top ten material categories that were found in the landfilled combined residential/ ICI MSW. These ten categories account for approximately 68% of landfilled residential/ICI MSW. Construction and Demolition materials, Food Scraps, and Compostable Paper and 'other' paper material categories account for 38.7% (15.1%, 14.1%, and 9.5%, respectively) of landfilled residential/ICI MSW.

Table 1-6. Top Ten Individual Material Categories in Landfilled Combined Residential/ICI MSW - Summer

Category	Waste Composition %	Cum. %
Construction and Demolition materials	15.1%	15.1%
Food Scraps	14.1%	29.2%
Compostable Paper and 'other' paper	9.5%	38.7%
Uncoated OCC	8.7%	47.5%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.5%	54.0%
Clothing and other textiles	4.8%	58.8%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.5%	61.2%
Other Film	2.3%	63.6%
Glass Bottles and Jars - clear	2.1%	65.7%
Remainder/ Composite Plastic	2.1%	67.8%
Total	**67.8%**	

Table 1-7 provides the composition profile of the landfilled combined residential/ICI MSW.

Table 1-7. Composition Profile of Landfilled Residential/ICI MSW

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**25.2%**	**2.21%**
	Newsprint	0.9%	0.12%
	High Grade Office Paper	1.1%	0.36%
	Magazines/Catalogs	0.7%	0.11%
	Uncoated OCC	8.7%	1.05%
	Kraft	0.5%	0.28%
	Boxboard	1.8%	0.17%
	Mixed Paper - Recyclable	1.8%	0.20%
	Compostable Paper and 'other' paper	9.5%	1.91%
	Milk and Juice cartons/boxes, coated	0.1%	0.02%
Plastics		**16.2%**	**1.37%**
	#1 PET Bottles/Jars	1.7%	0.15%
	#1 Other PET Containers & Packaging	0.2%	0.04%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.03%
	#2 HDPE Bottles/ Jars - Color	0.6%	0.35%
	#2 Other HDPE Containers & Packaging	0.1%	0.04%
	#6 Expanded Polystyrene Packaging (EPS)	1.3%	0.37%
	#3-#7 Other - All	1.6%	0.14%
	Other Rigid Plastic Products	1.8%	0.41%
	Grocery & Merchandise Bags	0.7%	0.09%
	Trash Bags	1.6%	0.23%
	Commercial & Industrial Film	1.8%	0.76%
	Other Film	2.3%	0.24%
	Remainder/ Composite Plastic	2.1%	0.69%
Glass		**6.1%**	**1.61%**
	Glass Bottles and Jars - clear	2.1%	0.26%
	Glass Bottles and Jars - brown	1.3%	0.26%
	Glass Bottles and Jars - green	1.1%	0.61%
	Glass Bottles and Jars - blue	0.1%	0.06%
	Flat Glass	1.4%	1.49%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**7.9%**	**1.80%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.09%
	Electronic Equipment	1.2%	0.27%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.5%	1.71%
Organics		**21.2%**	**1.47%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.5%	0.75%
	Yard Waste - Woody; branch >0.5"	0.0%	0.02%
	Food Scraps	14.1%	1.16%
	Bottom Fines and Dirt	1.0%	0.38%
	Diapers	1.9%	0.21%
	Other Organic	1.7%	0.26%
Metals		**3.1%**	**0.41%**
	Aluminum Beverage Containers	0.7%	0.08%
	Other Aluminum	0.2%	0.03%
	Ferrous containers (bi-metal cans)	0.6%	0.06%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	0.8%	0.27%
	Other Non-Ferrous	0.2%	0.07%
	Other Metal	0.5%	0.20%
Textiles		**4.8%**	**1.20%**
	Carpet and carpet padding	0.1%	0.02%
	Clothing and other textiles	4.8%	1.20%
HHW		**0.5%**	**0.09%**
	Household Hazardous Waste materials	0.5%	0.09%
C&D		**15.1%**	**3.06%**
	Construction and Demolition materials	15.1%	3.06%
Total Percentage		100.0%	

Summing the recoverable materials categories from Papers, Plastics, Glass, and metals as defined in this study's material categories, the summer sort data indicates 29.1% of the landfilled materials were recoverable.

1.3.4 Landfilled USD MSW Composition

In determining the landfilled USD MSW composition for residential and ICI MSW sectors, the samples were identified based on collection route within the USD. Out of 93 samples, a total of 70 (75%) of the samples were collected from the USD MSW sector. 34 (48.6%) USD samples were collected from residential MSW and 36 (51.4%) USD samples were collected from ICI MSW.

1.3.4.1 Landfilled USD Residential MSW

Figure 1-6 shows the percentage, by weight, of each of the ten material classes for the landfilled USD residential MSW subsector. Organics, Paper, and Plastics account for approximately 67% (31.6%, 19.1%, and 16.3%, respectively) of the landfilled MSW for this sector.

Figure 1-6. Composition of Landfilled USD Residential MSW by Material Class - Summer

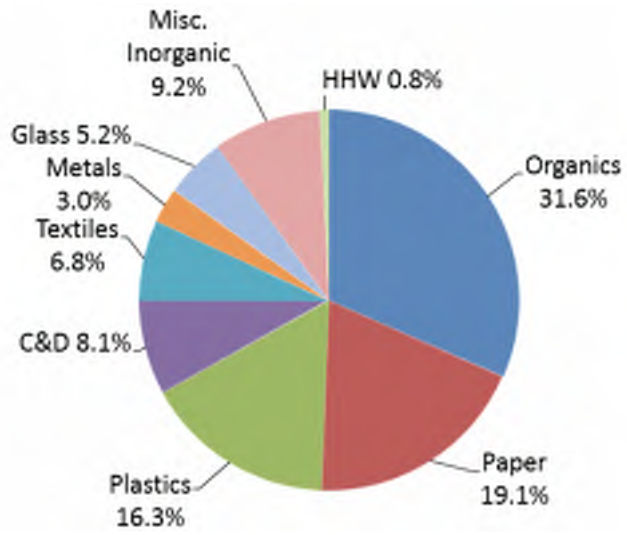


Table 1-8 lists the top ten material categories that were found in the landfilled USD residential MSW subsector. These ten categories account for approximately 69% of landfilled USD residential MSW. Food Scraps, Compostable Paper and 'other' paper, and Construction and Demolition materials material categories account for 38.8% (22.3%, 8.4%, and 8.1%, respectively) of landfilled USD residential MSW.

Table 1-8. Top Ten Individual Material Categories in Landfilled USD Residential MSW - Summer

Category	Waste Composition %	Cum. %
Food Scraps	22.3%	22.3%
Compostable Paper and 'other' paper	8.4%	30.7%
Construction and Demolition materials	8.1%	38.8%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	7.6%	46.4%
Clothing and other textiles	6.7%	53.1%
Diapers	4.1%	57.2%
Yard Waste - Compostable; leaves, grass, branches <0.5"	3.4%	60.6%
Glass Bottles and Jars - clear	3.2%	63.8%
#1 PET Bottles/Jars	2.6%	66.4%
Mixed Paper - Recyclable	2.6%	69.0%
Total	**69.0%**	

Table 1-9 provides the composition profile of landfilled USD residential MSW.

Table 1-9. Composition Profile of Landfilled Urban Residential MSW

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**19.1%**	**2.45%**
	Newsprint	1.6%	0.77%
	High Grade Office Paper	1.3%	0.80%
	Magazines/Catalogs	0.6%	0.27%
	Uncoated OCC	2.2%	0.81%
	Kraft	0.2%	0.22%
	Boxboard	2.0%	0.55%
	Mixed Paper - Recyclable	2.6%	0.52%
	Compostable Paper and 'other' paper	8.4%	1.14%
	Milk and Juice cartons/boxes, coated	0.2%	0.06%
Plastics		**16.3%**	**1.55%**
	#1 PET Bottles/Jars	2.6%	0.45%
	#1 Other PET Containers & Packaging	0.2%	0.10%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.13%
	#2 HDPE Bottles/ Jars - Color	0.5%	0.15%
	#2 Other HDPE Containers & Packaging	0.3%	0.19%
	#6 Expanded Polystyrene Packaging (EPS)	1.2%	0.20%
	#3-#7 Other - All	2.3%	0.34%
	Other Rigid Plastic Products	2.0%	0.91%
	Grocery & Merchandise Bags	1.1%	0.22%
	Trash Bags	1.5%	0.23%
	Commercial & Industrial Film	0.4%	0.42%
	Other Film	2.6%	0.40%
	Remainder/ Composite Plastic	1.3%	0.54%
Glass		**5.2%**	**1.12%**
	Glass Bottles and Jars - clear	3.2%	0.77%
	Glass Bottles and Jars - brown	1.5%	0.49%
	Glass Bottles and Jars - green	0.5%	0.20%
	Glass Bottles and Jars - blue	0.1%	0.08%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.04%

		Mean	+/-
Misc. Inorganic		**9.2%**	**5.24%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.3%	0.45%
	Electronic Equipment	1.3%	0.90%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	7.6%	4.51%
Organics		**31.6%**	**4.38%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	3.4%	2.03%
	Yard Waste - Woody; branch >0.5"	0.1%	0.10%
	Food Scraps	22.3%	3.21%
	Bottom Fines and Dirt	0.3%	0.13%
	Diapers	4.1%	1.31%
	Other Organic	1.4%	0.63%
Metals		**3.0%**	**0.52%**
	Aluminum Beverage Containers	1.0%	0.28%
	Other Aluminum	0.3%	0.10%
	Ferrous containers (bi-metal cans)	0.9%	0.21%
	Aerosol cans	0.3%	0.08%
	Other Ferrous	0.4%	0.25%
	Other Non-Ferrous	0.1%	0.07%
	Other Metal	0.1%	0.12%
Textiles		**6.8%**	**1.93%**
	Carpet and carpet padding	0.1%	0.17%
	Clothing and other textiles	6.7%	1.88%
HHW		**0.8%**	**0.32%**
	Household Hazardous Waste materials	0.8%	0.32%
C&D		**8.1%**	**4.86%**
	Construction and Demolition materials	8.1%	4.86%
Total Percentage		100.0%	

1.3.4.2 Landfilled USD ICI MSW

Figure 1-7 shows the percentage, by weight, of each of the ten material classes for the landfilled USD ICI MSW subsector. Paper, C&D, and Organics account for approximately 61.8% (29.1%, 17.2%, and 15.5%, respectively) of the landfilled MSW for this subsector.

Figure 1-7. Composition of Landfilled USD ICI MSW by Material Class - Summer

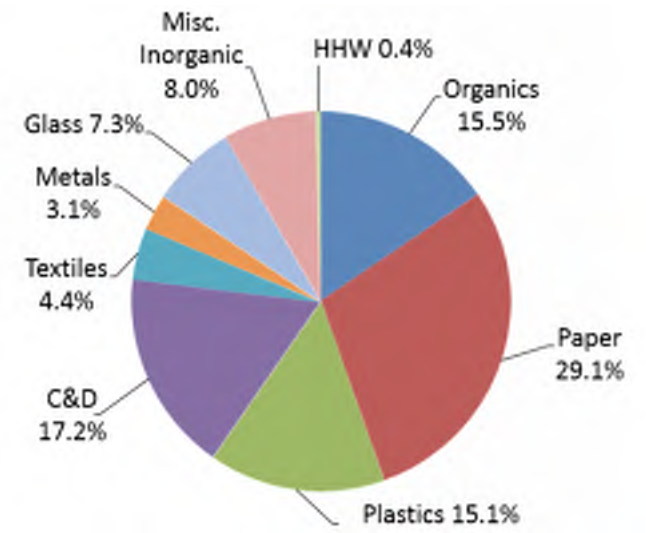


Table 1-10 lists the top ten material categories that were found in the landfilled USD ICI MSW subsector. These ten categories account for approximately 70% of the landfilled USD ICI MSW. Construction and Demolition materials, Uncoated OCC, and Compostable Paper and 'other' paper material categories account for 40.1% (17.2%, 12.2%, and 10.7%, respectively) of landfilled USD ICI MSW.

Table 1-10. Top Ten Individual Material Categories in Landfilled USD ICI MSW - Summer

Category	Waste Composition %	Cum. %
Construction and Demolition materials	17.2%	17.2%
Uncoated OCC	12.2%	29.4%
Compostable Paper and 'other' paper	10.7%	40.1%
Food Scraps	9.9%	50.0%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.6%	56.6%
Clothing and other textiles	4.4%	60.9%
Flat Glass	2.6%	63.5%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.3%	65.9%
Commercial & Industrial Film	2.2%	68.1%
Other Film	2.1%	70.2%
Total	**70.2%**	

Table 1-11 provides the composition profile of the landfilled USD ICI MSW sector.

Table 1-11. Composition Profile of Landfilled Urban ICI MSW

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**29.1%**	**5.85%**
	Newsprint	0.6%	0.27%
	High Grade Office Paper	1.2%	0.98%
	Magazines/Catalogs	0.5%	0.25%
	Uncoated OCC	12.2%	2.67%
	Kraft	0.7%	0.75%
	Boxboard	1.7%	0.42%
	Mixed Paper - Recyclable	1.5%	0.51%
	Compostable Paper and 'other' paper	10.7%	5.20%
	Milk and Juice cartons/boxes, coated	0.1%	0.04%
Plastics		**15.1%**	**3.15%**
	#1 PET Bottles/Jars	1.3%	0.37%
	#1 Other PET Containers & Packaging	0.1%	0.08%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.08%
	#2 HDPE Bottles/ Jars - Color	0.3%	0.13%
	#2 Other HDPE Containers & Packaging	0.1%	0.09%
	#6 Expanded Polystyrene Packaging (EPS)	1.0%	0.34%
	#3-#7 Other - All	1.5%	0.35%
	Other Rigid Plastic Products	1.8%	1.07%
	Grocery & Merchandise Bags	0.6%	0.21%
	Trash Bags	1.8%	0.60%
	Commercial & Industrial Film	2.2%	1.82%
	Other Film	2.1%	0.55%
	Remainder/ Composite Plastic	1.9%	1.32%
Glass		**7.3%**	**4.36%**
	Glass Bottles and Jars - clear	1.8%	0.65%
	Glass Bottles and Jars - brown	1.3%	0.70%
	Glass Bottles and Jars - green	1.4%	1.64%
	Glass Bottles and Jars - blue	0.1%	0.16%
	Flat Glass	2.6%	4.10%
	Other Glass	0.0%	0.08%

		Mean	+/-
Misc. Inorganic		**8.0%**	**4.15%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.22%
	Electronic Equipment	1.2%	0.66%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.6%	4.01%
Organics		**15.5%**	**3.40%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.3%	1.93%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	9.9%	2.60%
	Bottom Fines and Dirt	1.4%	1.02%
	Diapers	1.0%	0.49%
	Other Organic	0.9%	0.46%
Metals		**3.1%**	**1.08%**
	Aluminum Beverage Containers	0.6%	0.19%
	Other Aluminum	0.2%	0.06%
	Ferrous containers (bi-metal cans)	0.4%	0.14%
	Aerosol cans	0.1%	0.04%
	Other Ferrous	0.9%	0.72%
	Other Non-Ferrous	0.2%	0.18%
	Other Metal	0.7%	0.53%
Textiles		**4.4%**	**3.23%**
	Carpet and carpet padding	0.0%	0.01%
	Clothing and other textiles	4.4%	3.23%
HHW		**0.4%**	**0.21%**
	Household Hazardous Waste materials	0.4%	0.21%
C&D		**17.2%**	**6.46%**
	Construction and Demolition materials	17.2%	6.46%
Total Percentage		100.0%	

1.3.4.3 Landfilled USD Residential/ICI MSW Composition

Figure 1-8 shows the percentage, by weight, of each of the ten material classes for the landfilled USD residential/ICI MSW sector. Paper, Organics, and Plastics account for approximately 62.1% (25.8%, 20.8%, and 15.5%, respectively) of the landfilled MSW for this sector.

Figure 1-8. Composition of Landfilled USD Residential/ICI MSW by Material Class - Summer

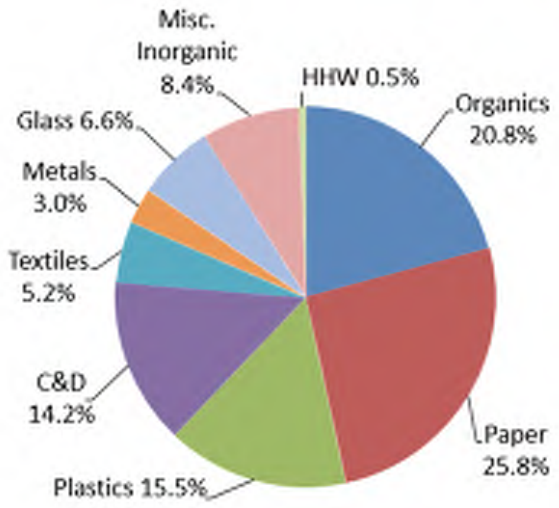


Table 1-12 lists the top ten material categories that were found in the landfilled USD residential/ICI MSW sector. These ten categories account for approximately 68% of landfilled USD MSW. Construction and Demolition materials, Food Scraps, and Compostable Paper and 'other' paper material categories account for 38.1% (14.2%, 14%, and 9.9%, respectively) of landfilled USD residential/ICI MSW.

Table 1-12. Top Ten Individual Material Categories in Landfilled USD Residential/ICI MSW - Summer

Category	Waste Composition %	Cum. %
Construction and Demolition materials	14.2%	14.2%
Food Scraps	14.0%	28.2%
Compostable Paper and 'other' paper	9.9%	38.1%
Uncoated OCC	8.9%	47.0%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.9%	53.9%
Clothing and other textiles	5.1%	59.1%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.7%	61.8%
Other Film	2.3%	64.0%
Glass Bottles and Jars - clear	2.3%	66.3%
Diapers	2.0%	68.3%
Total	**68.3%**	

Table 1-13 provides the composition profile of landfilled USD residential/ICI MSW.

Table 1-13. Composition Profile of Landfilled Urban Residential/ICI MSW

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**25.8%**	**2.61%**
	Newsprint	0.9%	0.15%
	High Grade Office Paper	1.2%	0.45%
	Magazines/Catalogs	0.5%	0.12%
	Uncoated OCC	8.9%	1.19%
	Kraft	0.5%	0.34%
	Boxboard	1.8%	0.20%
	Mixed Paper - Recyclable	1.8%	0.23%
	Compostable Paper and 'other' paper	9.9%	2.32%
	Milk and Juice cartons/boxes, coated	0.1%	0.02%
Plastics		**15.5%**	**1.41%**
	#1 PET Bottles/Jars	1.8%	0.17%
	#1 Other PET Containers & Packaging	0.2%	0.04%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.04%
	#2 HDPE Bottles/ Jars - Color	0.4%	0.06%
	#2 Other HDPE Containers & Packaging	0.2%	0.05%
	#6 Expanded Polystyrene Packaging (EPS)	1.1%	0.15%
	#3-#7 Other - All	1.7%	0.16%
	Other Rigid Plastic Products	1.9%	0.48%
	Grocery & Merchandise Bags	0.7%	0.10%
	Trash Bags	1.7%	0.27%
	Commercial & Industrial Film	1.6%	0.81%
	Other Film	2.3%	0.25%
	Remainder/ Composite Plastic	1.7%	0.59%
Glass		**6.6%**	**1.94%**
	Glass Bottles and Jars - clear	2.3%	0.30%
	Glass Bottles and Jars - brown	1.4%	0.32%
	Glass Bottles and Jars - green	1.1%	0.73%
	Glass Bottles and Jars - blue	0.1%	0.07%
	Flat Glass	1.7%	1.83%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**8.4%**	**1.93%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.11%
	Electronic Equipment	1.2%	0.31%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.9%	1.85%
Organics		**20.8%**	**1.59%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.7%	0.89%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	14.0%	1.21%
	Bottom Fines and Dirt	1.0%	0.45%
	Diapers	2.0%	0.26%
	Other Organic	1.1%	0.22%
Metals		**3.0%**	**0.48%**
	Aluminum Beverage Containers	0.7%	0.09%
	Other Aluminum	0.2%	0.03%
	Ferrous containers (bi-metal cans)	0.6%	0.07%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	0.7%	0.32%
	Other Non-Ferrous	0.2%	0.08%
	Other Metal	0.5%	0.24%
Textiles		**5.2%**	**1.45%**
	Carpet and carpet padding	0.0%	0.02%
	Clothing and other textiles	5.1%	1.45%
HHW		**0.5%**	**0.10%**
	Household Hazardous Waste materials	0.5%	0.10%
C&D		**14.2%**	**2.93%**
	Construction and Demolition materials	14.2%	2.93%
Total Percentage		100.0%	

1.3.5 Landfilled GSD MSW Composition

In determining the landfilled GSD MSW composition for the residential and ICI sectors, the samples were split based on collection route within the GSD (including satellite cities). Out of 93 samples collected, a total of 23 (25%) samples were collected from the GSD MSW sector, 15 (65.2%) GSD samples were collected from the GSD residential MSW subsector and 8 (34.8%) GSD samples were collected from the GSD ICI MSW subsector.

1.3.5.1 Landfilled GSD Residential MSW

Figure 1-9 shows the percentage, by weight, of each of the ten material classes for the landfilled GSD residential MSW subsector. Organics, Paper, and Plastics account for approximately 73.5% (35.8%, 24.4%, and 13.3%, respectively) of the total MSW for this sector.

Figure 1-9. Composition of Landfilled GSD Residential MSW by Material Class - Summer

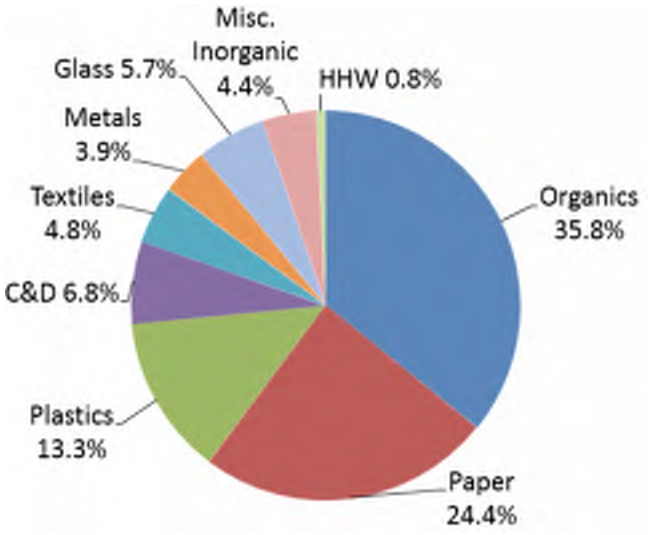


Table 1-14 lists the top ten material categories that were found in the landfilled GSD residential MSW subsector. These ten categories account for approximately 69% of the landfilled GSD residential MSW. Food Scraps, Compostable Paper and 'other' paper, and Construction and Demolition materials material categories account for 39.7% (23.0%, 9.8%, and 6.8%, respectively) of the landfilled GSD residential MSW.

Table 1-14. Top Ten Individual Material Categories in Landfilled GSD Residential MSW - Summer

Category	Waste Composition %	Cum. %
Food Scraps	23.0%	23.0%
Compostable Paper and 'other' paper	9.8%	32.9%
Construction and Demolition materials	6.8%	39.7%
Other Organic	6.7%	46.4%
Uncoated OCC	4.9%	51.2%
Clothing and other textiles	4.5%	55.8%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	3.6%	59.4%
Diapers	3.6%	63.0%
Mixed Paper - Recyclable	2.9%	65.9%
Glass Bottles and Jars - clear	2.8%	68.7%
Total	**68.7%**	

Table 1-15 provides the composition profile of landfilled GSD residential MSW.

Table 1-15. Composition Profile of Landfilled Rural Residential MSW

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**24.4%**	**3.09%**
	Newsprint	1.7%	0.80%
	High Grade Office Paper	0.8%	0.48%
	Magazines/Catalogs	1.4%	0.57%
	Uncoated OCC	4.9%	2.41%
	Kraft	0.3%	0.13%
	Boxboard	2.4%	0.53%
	Mixed Paper - Recyclable	2.9%	0.77%
	Compostable Paper and 'other' paper	9.8%	1.72%
	Milk and Juice cartons/boxes, coated	0.3%	0.11%
Plastics		**13.3%**	**1.74%**
	#1 PET Bottles/Jars	1.9%	0.32%
	#1 Other PET Containers & Packaging	0.4%	0.14%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.09%
	#2 HDPE Bottles/ Jars - Color	0.4%	0.14%
	#2 Other HDPE Containers & Packaging	0.0%	0.04%
	#6 Expanded Polystyrene Packaging (EPS)	0.7%	0.14%
	#3-#7 Other - All	1.8%	0.42%
	Other Rigid Plastic Products	1.5%	1.01%
	Grocery & Merchandise Bags	1.0%	0.14%
	Trash Bags	1.5%	0.22%
	Commercial & Industrial Film	0.0%	0.03%
	Other Film	2.5%	0.38%
	Remainder/ Composite Plastic	1.3%	0.46%
Glass		**5.7%**	**1.53%**
	Glass Bottles and Jars - clear	2.8%	0.69%
	Glass Bottles and Jars - brown	1.5%	0.52%
	Glass Bottles and Jars - green	1.3%	0.73%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.04%

		Mean	+/-
Misc. Inorganic		**4.4%**	**2.81%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.04%
	Electronic Equipment	0.8%	0.58%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	3.6%	2.64%
Organics		**35.8%**	**6.07%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	1.4%	0.83%
	Yard Waste - Woody; branch >0.5"	0.2%	0.21%
	Food Scraps	23.0%	5.19%
	Bottom Fines and Dirt	1.0%	1.24%
	Diapers	3.6%	1.31%
	Other Organic	6.7%	3.44%
Metals		**3.9%**	**1.10%**
	Aluminum Beverage Containers	0.9%	0.28%
	Other Aluminum	0.3%	0.11%
	Ferrous containers (bi-metal cans)	1.1%	0.34%
	Aerosol cans	0.3%	0.18%
	Other Ferrous	0.6%	0.73%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.8%	0.70%
Textiles		**4.8%**	**1.95%**
	Carpet and carpet padding	0.3%	0.45%
	Clothing and other textiles	4.5%	1.72%
HHW		**0.8%**	**0.61%**
	Household Hazardous Waste materials	0.8%	0.61%
C&D		**6.8%**	**7.01%**
	Construction and Demolition materials	6.8%	7.01%
Total Percentage		100.0%	

1.3.5.2 Landfilled GSD ICI MSW

Figure 1-10 shows the percentage, by weight, of each of the ten material classes for the landfilled GSD ICI MSW subsector. C&D, Plastics, and Paper account for approximately 68.4% (25.7%, 23.4%, and 19.3%, respectively) of the landfilled MSW for this subsector.

Figure 1-10. Composition of Landfilled GSD ICI MSW by Material Class - Summer

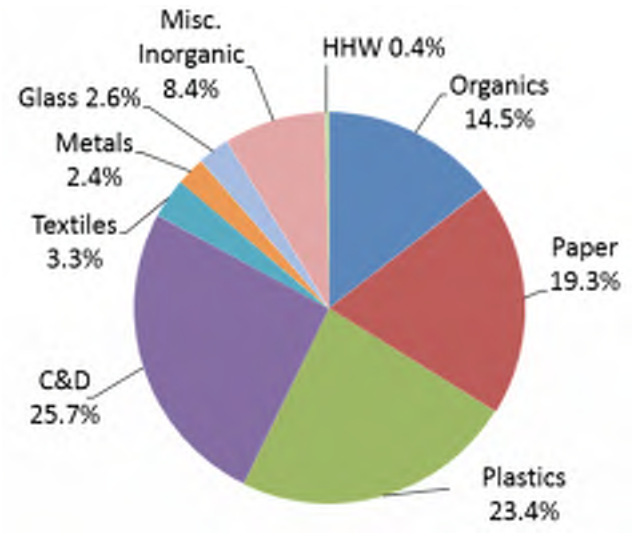


Table 1-16 lists the top ten material categories that were found in the landfilled GSD ICI MSW subsector. These ten categories account for approximately 76% of landfilled GSD ICI MSW. Construction and Demolition materials, Food Scraps, and Uncoated OCC material categories account for 44.4% (25.7%, 10.2%, and 8.6%, respectively) of landfilled GSD ICI MSW.

Table 1-16. Top Ten Individual Material Categories in Landfilled GSD ICI MSW - Summer

Category	Waste Composition %	Cum. %
Construction and Demolition materials	25.7%	25.7%
Food Scraps	10.2%	35.8%
Uncoated OCC	8.6%	44.4%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	7.0%	51.4%
Compostable Paper and 'other' paper	6.2%	57.6%
Remainder/ Composite Plastic	4.8%	62.4%
Commercial & Industrial Film	4.4%	66.7%
Clothing and other textiles	3.3%	70.1%
#6 Expanded Polystyrene Packaging (EPS)	3.2%	73.3%
Other Film	2.8%	76.1%
Total	**76.1%**	

Table 1-17 provides the composition profile of landfilled GSD ICI MSW.

Table 1-17. Composition Profile of Landfilled Rural ICI MSW

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**19.3%**	**5.55%**
	Newsprint	0.1%	0.07%
	High Grade Office Paper	0.4%	0.53%
	Magazines/Catalogs	0.8%	0.79%
	Uncoated OCC	8.6%	4.79%
	Kraft	0.6%	0.80%
	Boxboard	1.4%	0.89%
	Mixed Paper - Recyclable	1.1%	0.69%
	Compostable Paper and 'other' paper	6.2%	3.22%
	Milk and Juice cartons/boxes, coated	0.1%	0.15%
Plastics		**23.4%**	**8.52%**
	#1 PET Bottles/Jars	1.1%	0.59%
	#1 Other PET Containers & Packaging	0.3%	0.26%
	#2 HDPE Bottles/Jars - Clear	0.2%	0.18%
	#2 HDPE Bottles/ Jars - Color	2.7%	4.23%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	3.2%	4.30%
	#3-#7 Other - All	0.8%	0.71%
	Other Rigid Plastic Products	1.5%	1.52%
	Grocery & Merchandise Bags	0.7%	0.51%
	Trash Bags	0.9%	0.79%
	Commercial & Industrial Film	4.4%	4.76%
	Other Film	2.8%	1.73%
	Remainder/ Composite Plastic	4.8%	6.28%
Glass		**2.6%**	**3.00%**
	Glass Bottles and Jars - clear	1.2%	1.28%
	Glass Bottles and Jars - brown	0.4%	0.42%
	Glass Bottles and Jars - green	1.0%	1.49%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.07%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**8.4%**	**11.90%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.01%
	Electronic Equipment	1.4%	1.49%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	7.0%	10.78%
Organics		**14.5%**	**8.98%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.3%	3.02%
	Yard Waste - Woody; branch >0.5"	0.1%	0.16%
	Food Scraps	10.2%	7.87%
	Bottom Fines and Dirt	0.2%	0.30%
	Diapers	0.3%	0.34%
	Other Organic	1.5%	1.68%
Metals		**2.4%**	**1.16%**
	Aluminum Beverage Containers	0.5%	0.38%
	Other Aluminum	0.2%	0.19%
	Ferrous containers (bi-metal cans)	0.2%	0.24%
	Aerosol cans	0.0%	0.04%
	Other Ferrous	1.0%	1.03%
	Other Non-Ferrous	0.4%	0.45%
	Other Metal	0.1%	0.10%
Textiles		**3.3%**	**2.86%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	3.3%	2.86%
HHW		**0.4%**	**0.25%**
	Household Hazardous Waste materials	0.4%	0.25%
C&D		**25.7%**	**24.52%**
	Construction and Demolition materials	25.7%	24.52%
Total Percentage		100.0%	

1.3.5.3 Landfilled GSD Residential/ICI MSW Composition

Figure 1-11 shows the percentage, by weight, of each of the ten material classes for the landfilled GSD residential/ICI MSW sector. Organics, Paper, and Plastics account for approximately 62.6% (21.6%, 21%, and 20%, respectively) of the landfilled MSW for this sector.

Figure 1-11. Composition of Landfilled GSD Residential/ICI MSW by Material Class - Summer

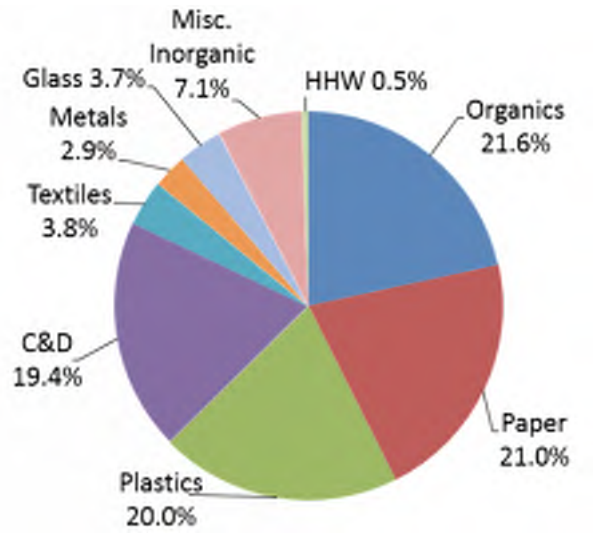


Table 1-18 lists the top ten material categories that were found in the landfilled GSD residential/ICI MSW sector. These ten categories account for approximately 71% of landfilled GSD residential/ICI MSW. Construction and Demolition materials, Food Scraps, and Compostable Paper and 'other' paper material categories account for 41.2% (19.4%, 14.4%, and 7.4%, respectively) of landfilled GSD residential/ICI MSW.

Table 1-18. Top Ten Individual Material Categories in Landfilled GSD Residential/ICI MSW - Summer

Category	Waste Composition %	Cum. %
Construction and Demolition materials	19.4%	19.4%
Food Scraps	14.4%	33.8%
Compostable Paper and 'other' paper	7.4%	41.2%
Uncoated OCC	7.3%	48.6%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.8%	54.4%
Clothing and other textiles	3.7%	58.2%
Remainder/ Composite Plastic	3.6%	61.8%
Other Organic	3.2%	65.0%
Commercial & Industrial Film	2.9%	67.9%
Other Film	2.7%	70.6%
Total	**70.6%**	

Table 1-19 provides the composition profile of landfilled GSD residential/ICI MSW.

Table 1-19. Composition Profile of Landfilled Rural Residential/ICI MSW

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**21.0%**	**2.49%**
	Newsprint	0.6%	0.09%
	High Grade Office Paper	0.5%	0.24%
	Magazines/Catalogs	1.0%	0.36%
	Uncoated OCC	7.3%	2.15%
	Kraft	0.5%	0.35%
	Boxboard	1.7%	0.40%
	Mixed Paper - Recyclable	1.7%	0.32%
	Compostable Paper and 'other' paper	7.4%	1.45%
	Milk and Juice cartons/boxes, coated	0.2%	0.07%
Plastics		**20.0%**	**3.79%**
	#1 PET Bottles/Jars	1.3%	0.26%
	#1 Other PET Containers & Packaging	0.4%	0.12%
	#2 HDPE Bottles/Jars - Clear	0.2%	0.08%
	#2 HDPE Bottles/ Jars - Color	2.0%	1.88%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	2.4%	1.91%
	#3-#7 Other - All	1.2%	0.32%
	Other Rigid Plastic Products	1.5%	0.68%
	Grocery & Merchandise Bags	0.8%	0.23%
	Trash Bags	1.1%	0.35%
	Commercial & Industrial Film	2.9%	2.12%
	Other Film	2.7%	0.77%
	Remainder/ Composite Plastic	3.6%	2.79%
Glass		**3.7%**	**1.35%**
	Glass Bottles and Jars - clear	1.7%	0.58%
	Glass Bottles and Jars - brown	0.8%	0.20%
	Glass Bottles and Jars - green	1.1%	0.67%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.03%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**7.1%**	**5.30%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.01%
	Electronic Equipment	1.2%	0.67%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.8%	4.80%
Organics		**21.6%**	**4.05%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.0%	1.35%
	Yard Waste - Woody; branch >0.5"	0.1%	0.07%
	Food Scraps	14.4%	3.55%
	Bottom Fines and Dirt	0.5%	0.19%
	Diapers	1.4%	0.21%
	Other Organic	3.2%	0.84%
Metals		**2.9%**	**0.53%**
	Aluminum Beverage Containers	0.6%	0.17%
	Other Aluminum	0.2%	0.08%
	Ferrous containers (bi-metal cans)	0.5%	0.11%
	Aerosol cans	0.1%	0.03%
	Other Ferrous	0.8%	0.47%
	Other Non-Ferrous	0.2%	0.20%
	Other Metal	0.3%	0.09%
Textiles		**3.8%**	**1.29%**
	Carpet and carpet padding	0.1%	0.05%
	Clothing and other textiles	3.7%	1.29%
HHW		**0.5%**	**0.13%**
	Household Hazardous Waste materials	0.5%	0.13%
C&D		**19.4%**	**10.93%**
	Construction and Demolition materials	19.4%	10.93%
Total Percentage		100.0%	

Section 2

Recovered Materials Characterization Summer Sampling Event

2.1 Objective

This section develops recovered materials composition estimates for the residential and ICI sectors within Davidson County for the Metro Nashville Waste Stream Characterization Study. All of the results in this section are for materials recovered and delivered to the Waste Management River Hills Materials Recovery Facility (MRF).

The following sections discuss the methodology used to obtain representative recovered materials composition estimates. This includes the study parameters, the number and allocation of samples, the facility where sampling activities were conducted, and the basis for selecting samples. Sampling activities were completed in accordance with CDM Smith's Work Plan, dated July 2017 (**Appendix A**). The goal of the of the two-season study was to sort and characterize 100 samples of recovered materials. Sampling was planned to be equally split between residential and ICI sectors (50/50).

2.2 Methodology

This section presents a summary of the data collection methods and calculation procedures used in this study.

2.2.1 Sample Allocation

Davidson County currently has one single-stream MRF that accepts recovered materials from the public, Metro, and private haulers. **Figure 1-1** shows the location of the facility. The total number of samples was maximized to the extent possible with the allocated field staff; however, the number varied based on the number of loads available that particular day, site conditions, site staff assistance, weather conditions, the time that loads were delivered to the site, and a number of other factors. Samples collected as part of the recovered materials characterization sampling were generally allocated equally between the residential and ICI sectors, corresponding to the approximate ratio of disposed quantities for each sector. The overall goal of the two-season study for sample distribution between Metro trucks and private trucks was 75% Metro and 25% privates for the recycled materials sorts. During the summer 2017 sampling event, sample distribution was 46.5% Metro and 53.5% private because most loads delivered to the MRF were hauled by private companies.

Table 2-1 summarizes the samples that were used to determine the recovered materials composition. A total of 43 samples were collected from the residential and commercial sectors in Summer 2017. Of the 43 samples collected, 17 (40%) were samples of commercial waste, and 26 (60%) were samples of residential waste, of those samples a total of 31 (72%) were samples from

USD areas and 12 (28%) were samples from GSD areas. **Figure 2-1** illustrates the geographic distribution and waste sectors sampled during the summer 2017 event.

Table 2-1. Number of Recovered Samples by Waste Sector - Summer

Sampling Group	Sample Count		Total Sample Wt.	Mean Sample Wt.
	No.	%	(pounds)	
Residential	26	100%	6,067	233.4
USD	*16*	*61.5%*	*3,762*	*235.1*
GSD	*10*	*38.5%*	*2,306*	*230.6*
ICI	17	100%	3,969	233.5
USD	*15*	*88.2%*	*3,591*	*239.4*
GSD	*2*	*11.8%*	*378*	*189.1*
Total Res/ICI	**43**	**100%**	**10,036**	**233.4**

2.2.2 Sampling Plan

CDM Smith contacted the facility for permission to conduct the sampling activities and to coordinate with the site manager. CDM Smith requested information to determine the relative mix of waste sectors that are disposed at the facility. From this information, CDM Smith constructed a sampling plan for the selection of vehicles. The sampling plan was developed to comply with the industry standards for conducting waste characterization studies and the ASTM standard D5231 for samples size. All work was completed in general accordance with the approved Work Plan.

2.2.3 Data Collection Procedures

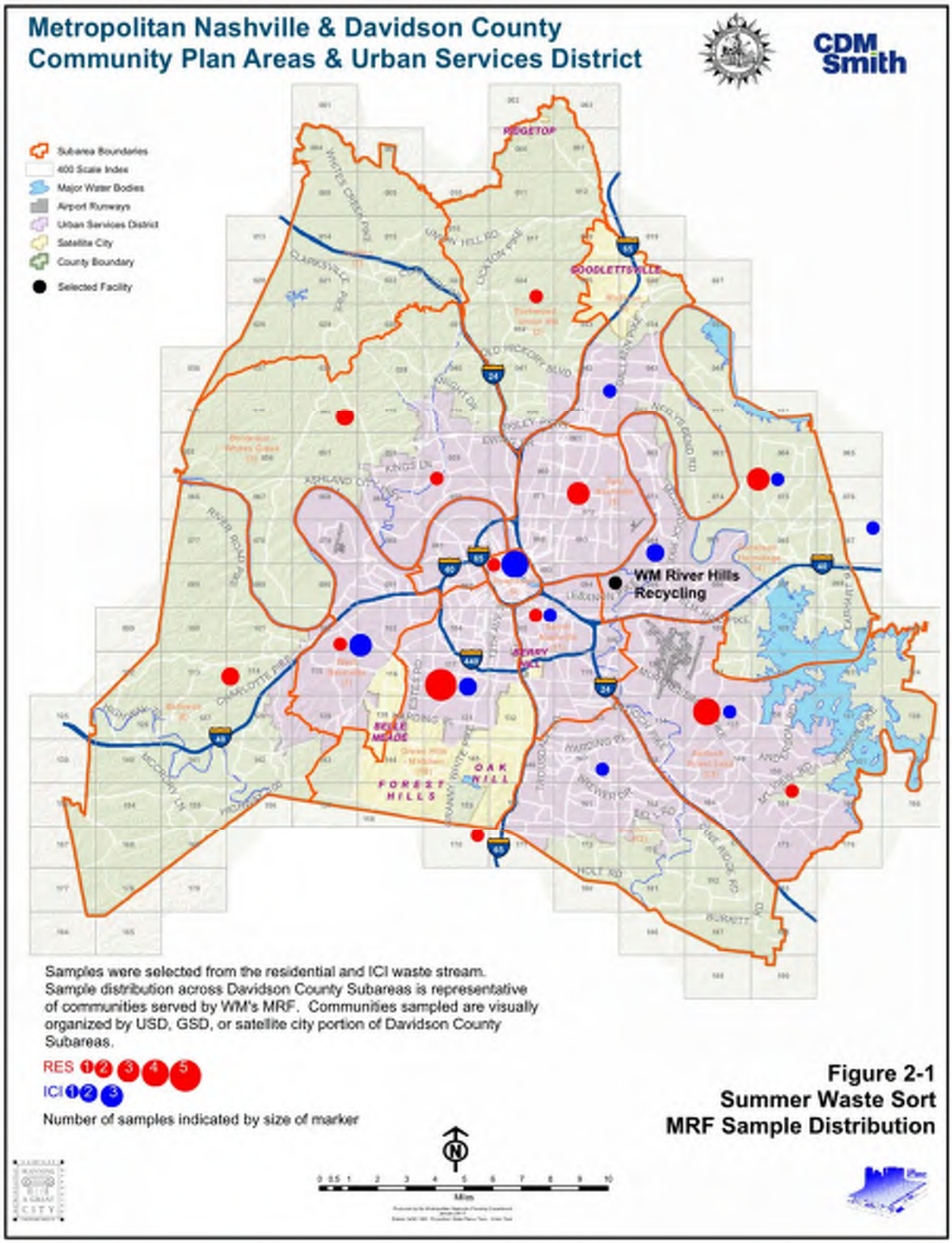
Site staff were consulted to assist CDM Smith in the selection of samples and in the gatehouse surveys that were used to determine the mix of materials recovered in Davidson County. Selected vehicles were tipped in a designated location and samples were collected from a randomly selected portion of each tipped pile. The samples consisted of approximately 200 to 300 pounds of materials. Each sample was sorted into 50 individual material categories within the nine material classes (Paper, Plastics, Glass, Metals, Organics, C&D, Inorganics, Household Hazardous Waste (HHW), and Textiles). Material definitions are provided in **Appendix A**.

After the samples were sorted each material category was weighed. Weight and load information associated with each sample were recorded on the Hand Sort Characterization Form provided in the Work Plan. Sample information and sample weights are provided in **Appendix B**.

2.2.4 Calculation Procedures

The approach to developing the recovered materials composition estimates in this report was to calculate the percent composition of each material in the waste sectors as outlined in the

Figure 2-1. Summer 2017 Recovered Materials Sample Distribution



Work Plan (**Appendix A**). All composition results presented in this report were calculated at a 90% confidence interval. This means that there is a 90% probability that the material is between the mean percentage value plus or minus the confidence interval. For example, there is a 90% probability that the overall Residential/ICI Davidson County recovered materials composition of uncoated OCC is between 33.47% and 38.73% (36.1% plus or minus 2.63%).

2.3 Recovered Materials Characterization Results

The recovered materials characterization results from the summer 2017 event are provided in this section. **Table 1-1** summarizes the sample information for each of the study's sampling groups and sectors. The goal for this event was to characterize 100 samples with a sample size of between 200 and 300 lbs (ASTM D5231). During the summer 2017 event, 43 samples were selected and hand sorted at the MRF in Davidson County. The sample sizes and numbers were within the Work Plan goals. The average sample weight for the 43 samples was 233 pounds. A total of 10,036 pounds of recovered materials was sorted and classified during the summer 2017 sampling event.

Sampling was planned to be equally split between residential and ICI sectors (50/50) and distribution between Metro trucks and private trucks at an approximate mix of 75% Metro to 25% private haulers for MSW sorts.

CDM Smith conducted the summer 2017 sampling event, over five days between July 17, 2017 and July 21, 2017. A total of 43 waste samples were sorted and characterized. Extremely high temperatures of greater than 100 degrees during multiple days of the sampling event and low volume of trucks delivering to the MRF on Monday impacted attaining the goal of processing 50 samples during the summer event.

In the following sections, the recovered materials composition results are presented for the ICI and residential waste sectors. The combined residential/ICI composition was determined by weighting the ICI and residential sampling results by using the ratio of residential to ICI recovered materials determined by the gatehouse surveys. A gatehouse survey was conducted each day of sampling and provides the basis of determination of Davidson County's mix of residential to ICI recovered materials. During the five-day summer sampling event, approximately 73% of the trucks passing through the transfer stations were from the residential waste stream and 27% were from the ICI waste stream. These ratios were applied to estimate the Combined Residential/ICI MSW Compositions.

Each composition profile is presented as follows:

- A pie chart depicting the nine material classes by weight (i.e., Paper, Plastic, Organics, Textiles, Glass, C&D, Metal, Inorganics, and HHW);
- A list of the ten largest material categories by weight (e.g., Food Scraps, High Grade Office Paper, Televisions, etc.), where waste composition percentages are rounded to the nearest tenth and cumulative totals represent the sum of unrounded results;
- A comprehensive table detailing the full composition results for the entire 50 material categories.

2.3.1 Recovered Residential Materials Composition

Figure 2-2 shows the percentage, by weight, of each of the nine material classes for the recovered residential materials sector. Paper, Plastics, and Metals account for approximately 93% (74.3%, 14.2%, and 4.1%, respectively) of the recovered residential materials for this sector.

Figure 2-2. Composition of Recovered Residential Materials by Material Class - Summer

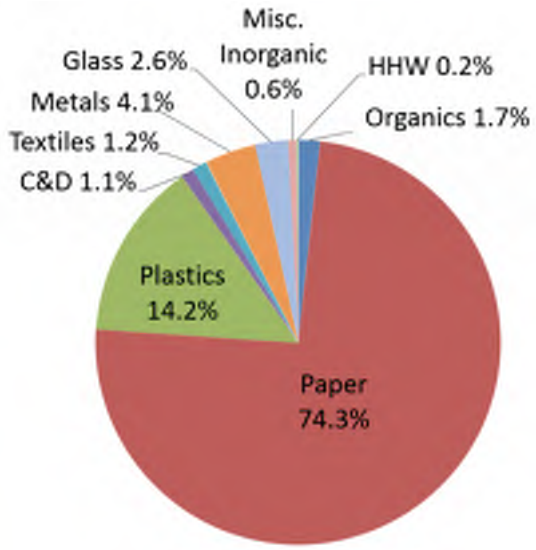


Table 2-2 lists the top ten material categories that were found in the recovered residential materials sector. These ten categories account for approximately 80% of recovered residential materials. Uncoated OCC, Newsprint, and Magazines/Catalogs material categories account for 49.1% (26.4%, 12.5%, and 10.2%, respectively) of recovered residential materials.

Table 2-2. Top Ten Individual Material Categories in Recovered Residential Materials - Summer

Category	Waste Composition %	Cum. %
Uncoated OCC	26.4%	26.4%
Newsprint	12.5%	38.9%
Magazines/Catalogs	10.2%	49.1%
Boxboard	8.1%	57.2%
Mixed Paper - Recyclable	7.3%	64.6%
#1 PET Bottles/Jars	4.6%	69.2%
High Grade Office Paper	4.3%	73.5%
Compostable Paper and 'other' paper	3.0%	76.5%
Kraft	2.0%	78.5%
Aluminum Beverage Containers	1.6%	80.2%
Total	**80.2%**	

Table 2-3 provides a composition profile of recovered residential materials.

Table 2-3. Composition Profile of Recovered Residential Materials

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**74.3%**	**6.28%**
	Newsprint	12.5%	3.64%
	High Grade Office Paper	4.3%	0.82%
	Magazines/Catalogs	10.2%	2.37%
	Uncoated OCC	26.4%	4.61%
	Kraft	2.0%	0.48%
	Boxboard	8.1%	1.21%
	Mixed Paper - Recyclable	7.3%	1.20%
	Compostable Paper and 'other' paper	3.0%	0.55%
	Milk and Juice cartons/boxes, coated	0.4%	0.09%
Plastics		**14.2%**	**1.55%**
	#1 PET Bottles/Jars	4.6%	0.71%
	#1 Other PET Containers & Packaging	0.9%	0.24%
	#2 HDPE Bottles/Jars - Clear	1.1%	0.26%
	#2 HDPE Bottles/ Jars - Color	1.5%	0.27%
	#2 Other HDPE Containers & Packaging	0.1%	0.08%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.10%
	#3-#7 Other - All	1.5%	0.25%
	Other Rigid Plastic Products	0.9%	0.29%
	Grocery & Merchandise Bags	0.4%	0.10%
	Trash Bags	0.3%	0.07%
	Commercial & Industrial Film	0.0%	0.04%
	Other Film	1.6%	0.39%
	Remainder/ Composite Plastic	1.0%	0.49%
Glass		**2.6%**	**0.65%**
	Glass Bottles and Jars - clear	1.2%	0.29%
	Glass Bottles and Jars - brown	0.9%	0.36%
	Glass Bottles and Jars - green	0.4%	0.20%
	Glass Bottles and Jars - blue	0.0%	0.03%
	Flat Glass	0.1%	0.13%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**0.6%**	**0.66%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.2%	0.20%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.4%	0.47%
Organics		**1.7%**	**0.57%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.3%	0.40%
	Yard Waste - Woody; branch >0.5"	0.0%	0.02%
	Food Scraps	0.9%	0.36%
	Bottom Fines and Dirt	0.3%	0.06%
	Diapers	0.1%	0.17%
	Other Organic	0.1%	0.12%
Metals		**4.1%**	**0.56%**
	Aluminum Beverage Containers	1.6%	0.30%
	Other Aluminum	0.2%	0.14%
	Ferrous containers (bi-metal cans)	1.5%	0.24%
	Aerosol cans	0.1%	0.04%
	Other Ferrous	0.5%	0.32%
	Other Non-Ferrous	0.0%	0.02%
	Other Metal	0.1%	0.04%
Textiles		**1.2%**	**1.28%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	1.2%	1.28%
HHW		**0.2%**	**0.10%**
	Household Hazardous Waste materials	0.2%	0.10%
C&D		**1.1%**	**0.59%**
	Construction and Demolition materials	1.1%	0.59%
Total Percentage		100.0%	

2.3.2 Recovered ICI Materials Composition

Figure 2-3 shows the percentage, by weight, of each of the nine material classes for the recovered ICI materials sector. Paper, Plastics, and Organics account for approximately 95% (86.3%, 5.4%, and 3.1%, respectively) of the recovered ICI materials for this sector.

Figure 2-3. Composition of Recovered ICI Materials by Material Class - Summer

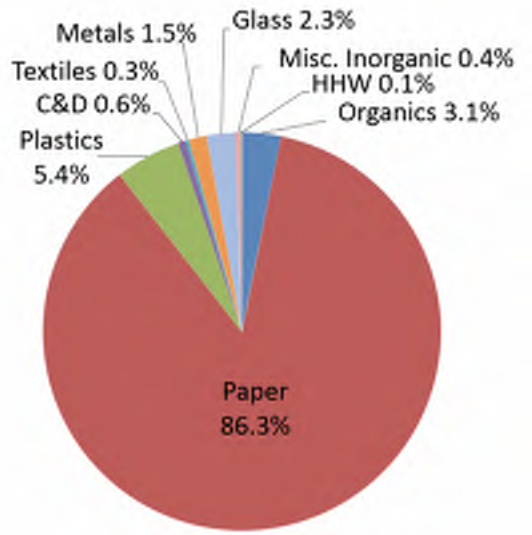


Table 2-4 lists the top ten material categories that were found in the recovered ICI materials sector. These ten categories account for approximately 92% of recovered ICI materials. Uncoated OCC, Magazines/Catalogs, and High Grade Office Paper material categories account for 75.8% (61.9%, 7.8%, and 6.2%, respectively) of recovered ICI materials.

Table 2-4. Top Ten Individual Material Categories in Recovered ICI Materials - Summer

Category	Waste Composition %	Cum. %
Uncoated OCC	61.9%	61.9%
Magazines/Catalogs	7.8%	69.7%
High Grade Office Paper	6.2%	75.8%
Boxboard	5.2%	81.0%
Food Scraps	2.6%	83.6%
Mixed Paper - Recyclable	2.0%	85.6%
Glass Bottles and Jars - clear	2.0%	87.7%
Compostable Paper and 'other' paper	1.5%	89.2%
Kraft	1.3%	90.4%
Commercial & Industrial Film	1.1%	91.6%
Total	**91.6%**	

Table 2-5 provides the composition profile of the recovered ICI materials sector.

Table 2-5. Composition Profile of Recovered ICI Materials

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**86.3%**	**10.06%**
	Newsprint	0.4%	0.30%
	High Grade Office Paper	6.2%	6.57%
	Magazines/Catalogs	7.8%	11.49%
	Uncoated OCC	61.9%	13.39%
	Kraft	1.3%	0.97%
	Boxboard	5.2%	2.44%
	Mixed Paper - Recyclable	2.0%	1.38%
	Compostable Paper and 'other' paper	1.5%	0.66%
	Milk and Juice cartons/boxes, coated	0.1%	0.05%
Plastics		**5.4%**	**1.70%**
	#1 PET Bottles/Jars	0.4%	0.18%
	#1 Other PET Containers & Packaging	0.1%	0.07%
	#2 HDPE Bottles/Jars - Clear	0.1%	0.09%
	#2 HDPE Bottles/ Jars - Color	0.2%	0.16%
	#2 Other HDPE Containers & Packaging	0.0%	0.03%
	#6 Expanded Polystyrene Packaging (EPS)	0.2%	0.08%
	#3-#7 Other - All	0.4%	0.26%
	Other Rigid Plastic Products	0.8%	0.50%
	Grocery & Merchandise Bags	0.1%	0.10%
	Trash Bags	0.4%	0.21%
	Commercial & Industrial Film	1.1%	0.78%
	Other Film	0.9%	0.45%
	Remainder/ Composite Plastic	0.6%	0.49%
Glass		**2.3%**	**2.32%**
	Glass Bottles and Jars - clear	2.0%	2.30%
	Glass Bottles and Jars - brown	0.1%	0.06%
	Glass Bottles and Jars - green	0.2%	0.26%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**0.4%**	**0.43%**
	Televisions	0.0%	0.03%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.05%
	Electronic Equipment	0.3%	0.38%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.1%	0.12%
Organics		**3.1%**	**2.53%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1%	0.19%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	2.6%	2.17%
	Bottom Fines and Dirt	0.1%	0.10%
	Diapers	0.2%	0.38%
	Other Organic	0.0%	0.02%
Metals		**1.5%**	**0.87%**
	Aluminum Beverage Containers	0.7%	0.79%
	Other Aluminum	0.0%	0.04%
	Ferrous containers (bi-metal cans)	0.2%	0.12%
	Aerosol cans	0.0%	0.01%
	Other Ferrous	0.3%	0.29%
	Other Non-Ferrous	0.1%	0.19%
	Other Metal	0.0%	0.03%
Textiles		**0.3%**	**0.25%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.3%	0.25%
HHW		**0.1%**	**0.05%**
	Household Hazardous Waste materials	0.1%	0.05%
C&D		**0.6%**	**0.72%**
	Construction and Demolition materials	0.6%	0.72%
Total Percentage		100.0%	

2.3.3 Recovered Residential/ICI Materials Composition

Figure 2-4 shows the percentage, by weight, of each of the nine material classes for the combined recovered residential and ICI materials sectors. Paper, Plastics, and Metals account for approximately 93% (77.6%, 11.79%, and 3.38%, respectively) of the recovered combined residential/ICI materials.

Figure 2-4. Composition of Recovered Residential/ICI Materials by Material Class - Summer

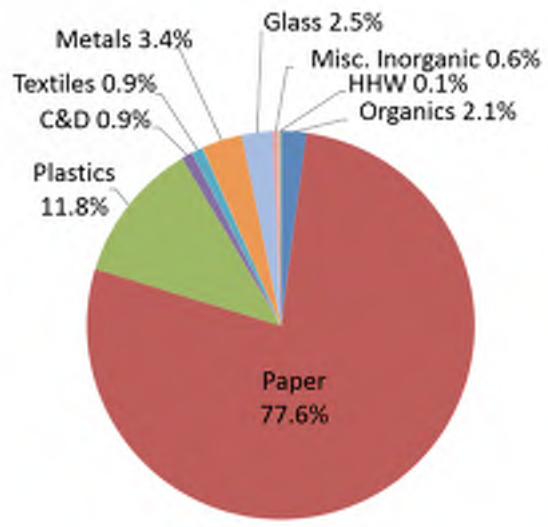


Table 2-6 lists the top ten material categories that were found in the recovered combined residential/ICI materials. These ten categories account for approximately 82% of recovered combined residential/ICI materials. Uncoated OCC, Magazines/Catalogs, and Newsprint material categories account for 54.8% (36.1%, 9.5%, and 9.2%, respectively) of recovered combined residential/ICI materials.

Table 2-6. Top Ten Individual Material Categories in Recovered Residential/ICI Materials - Summer

Category	Waste Composition %	Cum. %
Uncoated OCC	36.1%	36.1%
Magazines/Catalogs	9.5%	45.6%
Newsprint	9.2%	54.8%
Boxboard	7.3%	62.1%
Mixed Paper - Recyclable	5.9%	68.0%
High Grade Office Paper	4.8%	72.9%
#1 PET Bottles/Jars	3.5%	76.3%
Compostable Paper and 'other' paper	2.6%	78.9%
Kraft	1.8%	80.8%
Glass Bottles and Jars - clear	1.4%	82.2%
Total	**82.2%**	

Table 2-7 provides the composition profile of the recovered combined residential/ICI materials.

Table 2-7. Composition Profile of Recovered Residential/ICI Materials

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**77.6%**	**3.41%**
	Newsprint	9.2%	1.93%
	High Grade Office Paper	4.8%	0.65%
	Magazines/Catalogs	9.5%	1.52%
	Uncoated OCC	36.1%	2.63%
	Kraft	1.8%	0.26%
	Boxboard	7.3%	0.66%
	Mixed Paper - Recyclable	5.9%	0.65%
	Compostable Paper and 'other' paper	2.6%	0.30%
	Milk and Juice cartons/boxes, coated	0.3%	0.05%
Plastics		**11.8%**	**0.83%**
	#1 PET Bottles/Jars	3.5%	0.37%
	#1 Other PET Containers & Packaging	0.7%	0.12%
	#2 HDPE Bottles/Jars - Clear	0.9%	0.14%
	#2 HDPE Bottles/ Jars - Color	1.1%	0.14%
	#2 Other HDPE Containers & Packaging	0.1%	0.04%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.05%
	#3-#7 Other - All	1.2%	0.14%
	Other Rigid Plastic Products	0.9%	0.16%
	Grocery & Merchandise Bags	0.3%	0.05%
	Trash Bags	0.3%	0.04%
	Commercial & Industrial Film	0.3%	0.06%
	Other Film	1.4%	0.21%
	Remainder/ Composite Plastic	0.9%	0.26%
Glass		**2.5%**	**0.38%**
	Glass Bottles and Jars - clear	1.4%	0.23%
	Glass Bottles and Jars - brown	0.7%	0.19%
	Glass Bottles and Jars - green	0.4%	0.11%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.1%	0.07%
	Other Glass	0.0%	0.01%

		Mean	+/-
Misc. Inorganic		**0.6%**	**0.35%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.2%	0.11%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.4%	0.25%
Organics		**2.1%**	**0.35%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.2%	0.21%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	1.4%	0.25%
	Bottom Fines and Dirt	0.3%	0.03%
	Diapers	0.2%	0.09%
	Other Organic	0.1%	0.07%
Metals		**3.4%**	**0.30%**
	Aluminum Beverage Containers	1.4%	0.17%
	Other Aluminum	0.1%	0.07%
	Ferrous containers (bi-metal cans)	1.2%	0.13%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	0.5%	0.17%
	Other Non-Ferrous	0.1%	0.02%
	Other Metal	0.1%	0.02%
Textiles		**0.9%**	**0.68%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.9%	0.68%
HHW		**0.1%**	**0.06%**
	Household Hazardous Waste materials	0.1%	0.06%
C&D		**0.9%**	**0.32%**
	Construction and Demolition materials	0.9%	0.32%
Total Percentage		100.0%	

2.3.4 Recovered USD MSW Composition

In determining the recovered USD MSW composition for residential and ICI MSW sectors, the samples were identified based on collection route within the USD. Out of 43 samples, a total of 31 (72%) of the samples were collected from the USD MSW sector. 16 (51.6%) USD samples were collected from residential MSW and 15 (48.4%) USD samples were collected from ICI MSW.

2.3.4.1 Recovered USD Residential MSW

Figure 2-5 shows the percentage, by weight, of each of the ten material classes for the recovered USD residential MSW subsector. Paper, Plastics, and Metals account for approximately 92% (75.3%, 12.9%, and 4.1%, respectively) of the recovered MSW for this sector.

Figure 2-5. Composition of Recovered USD Residential MSW by Material Class - Summer

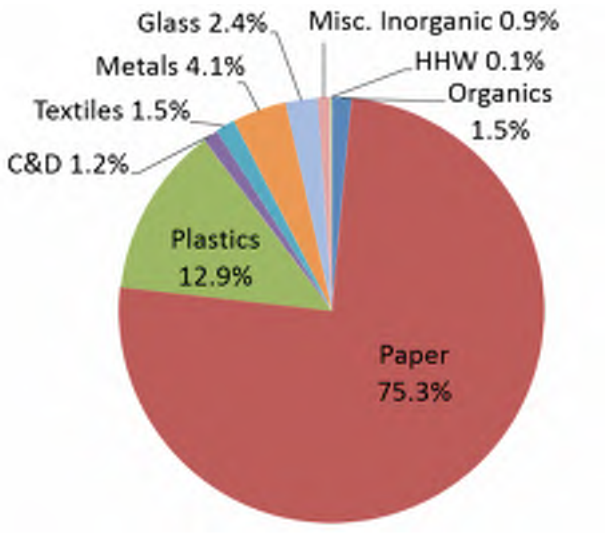


Table 2-8 lists the top ten material categories that were found in the recovered USD residential MSW subsector. These ten categories account for approximately 81% of recovered USD residential MSW. Uncoated OCC, Newsprint, and Magazines/Catalogs material categories account for 50.4% (26.7%, 12.2%, and 11.6%, respectively) of recovered USD residential MSW.

Table 2-8. Top Ten Individual Material Categories in Recovered USD Residential MSW - Summer

Category	Waste Composition %	Cum. %
Uncoated OCC	26.7%	26.7%
Newsprint	12.2%	38.8%
Magazines/Catalogs	11.6%	50.4%
Boxboard	7.9%	58.3%
Mixed Paper - Recyclable	7.0%	65.3%
High Grade Office Paper	4.7%	70.0%
#1 PET Bottles/Jars	4.2%	74.1%
Compostable Paper and 'other' paper	2.7%	76.9%
Kraft	2.1%	79.0%
Aluminum Beverage Containers	1.7%	80.7%
Total	**80.7%**	

Table 2-9 provides the composition profile of recovered USD residential MSW.

Table 2-9. Composition Profile of Recovered Urban Residential Materials

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**75.3%**	**8.79%**
	Newsprint	12.2%	4.58%
	High Grade Office Paper	4.7%	1.15%
	Magazines/Catalogs	11.6%	3.39%
	Uncoated OCC	26.7%	6.58%
	Kraft	2.1%	0.67%
	Boxboard	7.9%	1.39%
	Mixed Paper - Recyclable	7.0%	1.59%
	Compostable Paper and 'other' paper	2.7%	0.66%
	Milk and Juice cartons/boxes, coated	0.4%	0.12%
Plastics		**12.9%**	**1.51%**
	#1 PET Bottles/Jars	4.2%	0.77%
	#1 Other PET Containers & Packaging	0.8%	0.26%
	#2 HDPE Bottles/Jars - Clear	1.0%	0.26%
	#2 HDPE Bottles/ Jars - Color	1.4%	0.26%
	#2 Other HDPE Containers & Packaging	0.1%	0.11%
	#6 Expanded Polystyrene Packaging (EPS)	0.4%	0.15%
	#3-#7 Other - All	1.4%	0.26%
	Other Rigid Plastic Products	0.7%	0.35%
	Grocery & Merchandise Bags	0.3%	0.12%
	Trash Bags	0.2%	0.08%
	Commercial & Industrial Film	0.1%	0.07%
	Other Film	1.3%	0.29%
	Remainder/ Composite Plastic	1.0%	0.57%
Glass		**2.4%**	**0.76%**
	Glass Bottles and Jars - clear	1.2%	0.36%
	Glass Bottles and Jars - brown	0.8%	0.49%
	Glass Bottles and Jars - green	0.5%	0.27%
	Glass Bottles and Jars - blue	0.0%	0.04%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.01%

		Mean	+/-
Misc. Inorganic		**0.9%**	**1.05%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.3%	0.33%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.6%	0.74%
Organics		**1.5%**	**0.52%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.01%
	Yard Waste - Woody; branch >0.5"	0.0%	0.03%
	Food Scraps	0.9%	0.44%
	Bottom Fines and Dirt	0.3%	0.08%
	Diapers	0.1%	0.05%
	Other Organic	0.2%	0.20%
Metals		**4.1%**	**0.67%**
	Aluminum Beverage Containers	1.7%	0.28%
	Other Aluminum	0.1%	0.04%
	Ferrous containers (bi-metal cans)	1.5%	0.29%
	Aerosol cans	0.1%	0.04%
	Other Ferrous	0.6%	0.47%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.0%	0.03%
Textiles		**1.5%**	**2.06%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	1.5%	2.06%
HHW		**0.1%**	**0.11%**
	Household Hazardous Waste materials	0.1%	0.11%
C&D		**1.2%**	**0.87%**
	Construction and Demolition materials	1.2%	0.87%
Total Percentage		100.0%	

2.3.4.2 Recovered USD ICI MSW

Figure 2-6 shows the percentage, by weight, of each of the ten material classes for the recovered USD ICI MSW subsector. Paper, Plastics, and Organics account for approximately 95.1% (86.4%, 5.3%, and 3.4%, respectively) of the recovered MSW for this subsector.

Figure 2-6. Composition of Recovered USD ICI MSW by Material Class - Summer

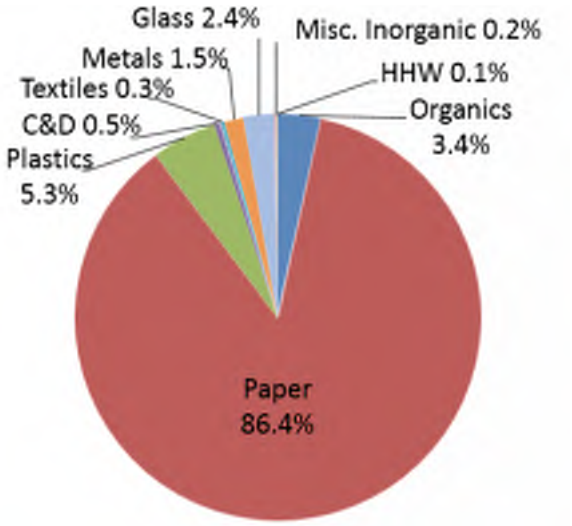


Table 2-10 lists the top ten material categories that were found in the recovered USD ICI MSW subsector. These ten categories account for approximately 92% of the recovered USD ICI MSW. Uncoated OCC, Magazines/Catalogs, and High Grade Office Paper material categories account for 76.3% (61.3%, 8.5%, and 6.4%, respectively) of recovered USD ICI MSW.

Table 2-10. Top Ten Individual Material Categories in Recovered USD ICI MSW - Summer

Category	Waste Composition %	Cum. %
Uncoated OCC	61.3%	61.3%
Magazines/Catalogs	8.5%	69.8%
High Grade Office Paper	6.4%	76.3%
Boxboard	5.3%	81.6%
Food Scraps	2.8%	84.4%
Glass Bottles and Jars - clear	2.1%	86.5%
Compostable Paper and 'other' paper	1.6%	88.1%
Mixed Paper - Recyclable	1.4%	89.5%
Kraft	1.4%	90.8%
Commercial & Industrial Film	1.1%	91.9%
Total	**91.9%**	

Table 2-11 provides the composition profile of the recovered USD ICI MSW sector.

Table 2-11. Composition Profile of Recovered Urban ICI Materials

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**86.4%**	**9.98%**
	Newsprint	0.4%	0.32%
	High Grade Office Paper	6.4%	7.26%
	Magazines/Catalogs	8.5%	12.69%
	Uncoated OCC	61.3%	14.46%
	Kraft	1.4%	1.06%
	Boxboard	5.3%	2.68%
	Mixed Paper - Recyclable	1.4%	1.07%
	Compostable Paper and 'other' paper	1.6%	0.72%
	Milk and Juice cartons/boxes, coated	0.1%	0.05%
Plastics		**5.3%**	**1.87%**
	#1 PET Bottles/Jars	0.3%	0.17%
	#1 Other PET Containers & Packaging	0.1%	0.08%
	#2 HDPE Bottles/Jars - Clear	0.1%	0.09%
	#2 HDPE Bottles/ Jars - Color	0.2%	0.17%
	#2 Other HDPE Containers & Packaging	0.0%	0.03%
	#6 Expanded Polystyrene Packaging (EPS)	0.2%	0.09%
	#3-#7 Other - All	0.4%	0.28%
	Other Rigid Plastic Products	0.8%	0.55%
	Grocery & Merchandise Bags	0.2%	0.11%
	Trash Bags	0.4%	0.23%
	Commercial & Industrial Film	1.1%	0.85%
	Other Film	0.9%	0.50%
	Remainder/ Composite Plastic	0.5%	0.47%
Glass		**2.4%**	**2.56%**
	Glass Bottles and Jars - clear	2.1%	2.54%
	Glass Bottles and Jars - brown	0.1%	0.06%
	Glass Bottles and Jars - green	0.2%	0.29%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**0.2%**	**0.15%**
	Televisions	0.0%	0.04%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.0%	0.03%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.1%	0.13%
Organics		**3.4%**	**2.78%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1%	0.21%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	2.8%	2.38%
	Bottom Fines and Dirt	0.1%	0.10%
	Diapers	0.3%	0.42%
	Other Organic	0.0%	0.02%
Metals		**1.5%**	**0.95%**
	Aluminum Beverage Containers	0.8%	0.87%
	Other Aluminum	0.0%	0.05%
	Ferrous containers (bi-metal cans)	0.2%	0.12%
	Aerosol cans	0.0%	0.01%
	Other Ferrous	0.4%	0.32%
	Other Non-Ferrous	0.1%	0.21%
	Other Metal	0.0%	0.03%
Textiles		**0.3%**	**0.28%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.3%	0.28%
HHW		**0.1%**	**0.06%**
	Household Hazardous Waste materials	0.1%	0.06%
C&D		**0.5%**	**0.74%**
	Construction and Demolition materials	0.5%	0.74%
Total Percentage		100.0%	

2.3.4.3 Recovered USD Residential/ICI MSW Composition

Figure 2-7 shows the percentage, by weight, of each of the ten material classes for the recovered USD residential/ICI MSW sector. Paper, Plastics, and Metals account for approximately 92.5% (78.3%, 10.8%, and 3.4%, respectively) of the recovered MSW for this sector.

Figure 2-7. Composition of Recovered USD Residential/ICI MSW by Material Class - Summer

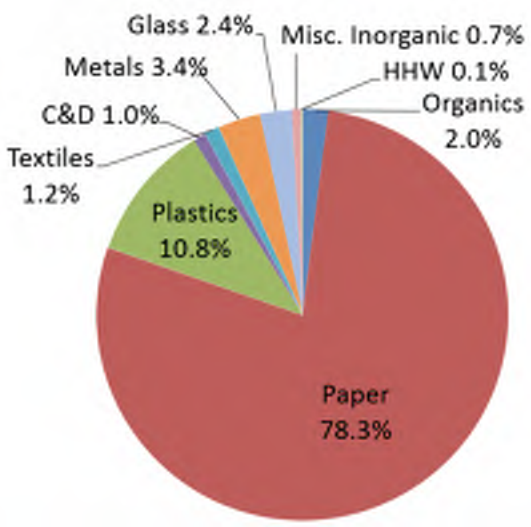


Table 2-12 lists the top ten material categories that were found in the recovered USD residential/ICI MSW sector. These ten categories account for approximately 82% of recovered USD MSW. Uncoated OCC, Magazines/Catalogs, and Newsprint material categories account for 55.8% (36.1%, 10.8%, and 8.9%, respectively) of recovered USD residential/ICI MSW.

Table 2-12. Top Ten Individual Material Categories in Recovered USD Residential/ICI MSW - Summer

Category	Waste Composition %	Cum. %
Uncoated OCC	36.1%	36.1%
Magazines/Catalogs	10.8%	46.9%
Newsprint	8.9%	55.8%
Boxboard	7.2%	63.0%
Mixed Paper - Recyclable	5.4%	68.5%
High Grade Office Paper	5.2%	73.6%
#1 PET Bottles/Jars	3.1%	76.7%
Compostable Paper and 'other' paper	2.4%	79.2%
Kraft	1.9%	81.1%
Food Scraps	1.4%	82.5%
Total	**82.5%**	

Table 2-13 provides the composition profile of recovered USD residential/ICI MSW.

Table 2-13. Composition Profile of Recovered Urban Residential/ICI Materials

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**78.3%**	**4.71%**
	Newsprint	8.9%	2.42%
	High Grade Office Paper	5.2%	0.81%
	Magazines/Catalogs	10.8%	2.03%
	Uncoated OCC	36.1%	3.64%
	Kraft	1.9%	0.36%
	Boxboard	7.2%	0.76%
	Mixed Paper - Recyclable	5.4%	0.84%
	Compostable Paper and 'other' paper	2.4%	0.36%
	Milk and Juice cartons/boxes, coated	0.3%	0.06%
Plastics		**10.8%**	**0.81%**
	#1 PET Bottles/Jars	3.1%	0.41%
	#1 Other PET Containers & Packaging	0.6%	0.14%
	#2 HDPE Bottles/Jars - Clear	0.7%	0.14%
	#2 HDPE Bottles/ Jars - Color	1.1%	0.14%
	#2 Other HDPE Containers & Packaging	0.1%	0.06%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.08%
	#3-#7 Other - All	1.1%	0.14%
	Other Rigid Plastic Products	0.8%	0.19%
	Grocery & Merchandise Bags	0.3%	0.06%
	Trash Bags	0.3%	0.05%
	Commercial & Industrial Film	0.3%	0.07%
	Other Film	1.2%	0.16%
	Remainder/ Composite Plastic	0.9%	0.30%
Glass		**2.4%**	**0.45%**
	Glass Bottles and Jars - clear	1.4%	0.27%
	Glass Bottles and Jars - brown	0.6%	0.26%
	Glass Bottles and Jars - green	0.4%	0.15%
	Glass Bottles and Jars - blue	0.0%	0.02%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**0.7%**	**0.56%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.2%	0.17%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.5%	0.39%
Organics		**2.0%**	**0.34%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.02%
	Yard Waste - Woody; branch >0.5"	0.0%	0.02%
	Food Scraps	1.4%	0.29%
	Bottom Fines and Dirt	0.3%	0.04%
	Diapers	0.1%	0.04%
	Other Organic	0.1%	0.10%
Metals		**3.4%**	**0.36%**
	Aluminum Beverage Containers	1.4%	0.16%
	Other Aluminum	0.1%	0.02%
	Ferrous containers (bi-metal cans)	1.2%	0.15%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	0.6%	0.25%
	Other Non-Ferrous	0.0%	0.02%
	Other Metal	0.0%	0.02%
Textiles		**1.2%**	**1.09%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	1.2%	1.09%
HHW		**0.1%**	**0.06%**
	Household Hazardous Waste materials	0.1%	0.06%
C&D		**1.0%**	**0.46%**
	Construction and Demolition materials	1.0%	0.46%
Total Percentage		100.0%	

2.3.5 Recovered GSD MSW Composition

In determining the recovered GSD MSW composition for the residential and ICI sectors, the samples were split based on collection route within the GSD (including satellite cities). Out of 43 samples collected, a total of 12 (28%) samples were collected from the GSD MSW sector, 10 (83.3%) GSD samples were collected from the GSD residential MSW subsector and 2 (16.7%) GSD samples were collected from the GSD ICI MSW subsector.

2.3.5.1 Recovered GSD Residential MSW

Figure 2-8 shows the percentage, by weight, of each of the ten material classes for the recovered GSD residential MSW subsector. Paper, Plastics, and Metals account for approximately 93.1% (72.8%, 16.2%, and 4.1%, respectively) of the total MSW for this sector.

Figure 2-8. Composition of Recovered GSD Residential MSW by Material Class - Summer

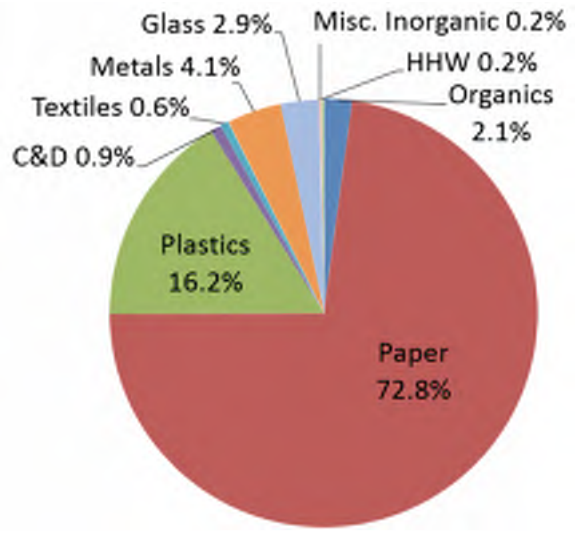


Table 2-14 lists the top ten material categories that were found in the recovered GSD residential MSW subsector. These ten categories account for approximately 80% of the recovered GSD residential MSW. Uncoated OCC, Newsprint, and Boxboard material categories account for 47.6% (26%, 13%, and 8.6%, respectively) of the recovered GSD residential MSW.

Table 2-14. Top Ten Individual Material Categories in Recovered GSD Residential MSW - Summer

Category	Waste Composition %	Cum. %
Uncoated OCC	26.0%	26.0%
Newsprint	13.0%	39.0%
Boxboard	8.6%	47.6%
Mixed Paper - Recyclable	8.0%	55.6%
Magazines/Catalogs	7.9%	63.4%
#1 PET Bottles/Jars	5.3%	68.7%
High Grade Office Paper	3.8%	72.5%
Compostable Paper and 'other' paper	3.4%	75.9%
Other Film	2.0%	77.9%
Kraft	1.9%	79.8%
Total	**79.8%**	

Table 2-15 provides the composition profile of recovered GSD residential MSW.

Table 2-15. Composition Profile of Recovered Rural Residential Materials

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**72.8%**	**8.66%**
	Newsprint	13.0%	6.32%
	High Grade Office Paper	3.8%	1.07%
	Magazines/Catalogs	7.9%	2.59%
	Uncoated OCC	26.0%	6.05%
	Kraft	1.9%	0.66%
	Boxboard	8.6%	2.33%
	Mixed Paper - Recyclable	8.0%	1.90%
	Compostable Paper and 'other' paper	3.4%	0.99%
	Milk and Juice cartons/boxes, coated	0.4%	0.16%
Plastics		**16.2%**	**3.13%**
	#1 PET Bottles/Jars	5.3%	1.36%
	#1 Other PET Containers & Packaging	1.0%	0.47%
	#2 HDPE Bottles/Jars - Clear	1.4%	0.53%
	#2 HDPE Bottles/ Jars - Color	1.5%	0.59%
	#2 Other HDPE Containers & Packaging	0.1%	0.10%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.12%
	#3-#7 Other - All	1.5%	0.54%
	Other Rigid Plastic Products	1.2%	0.49%
	Grocery & Merchandise Bags	0.6%	0.14%
	Trash Bags	0.3%	0.11%
	Commercial & Industrial Film	0.0%	0.01%
	Other Film	2.0%	0.88%
	Remainder/ Composite Plastic	0.9%	0.93%
Glass		**2.9%**	**1.21%**
	Glass Bottles and Jars - clear	1.2%	0.51%
	Glass Bottles and Jars - brown	1.1%	0.55%
	Glass Bottles and Jars - green	0.3%	0.31%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.2%	0.35%
	Other Glass	0.0%	0.07%

		Mean	+/-
Misc. Inorganic		**0.2%**	**0.29%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.0%	0.01%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.2%	0.29%
Organics		**2.1%**	**1.25%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.7%	1.04%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	0.8%	0.64%
	Bottom Fines and Dirt	0.3%	0.09%
	Diapers	0.3%	0.44%
	Other Organic	0.0%	0.03%
Metals		**4.1%**	**1.03%**
	Aluminum Beverage Containers	1.5%	0.65%
	Other Aluminum	0.3%	0.36%
	Ferrous containers (bi-metal cans)	1.5%	0.45%
	Aerosol cans	0.1%	0.07%
	Other Ferrous	0.4%	0.37%
	Other Non-Ferrous	0.1%	0.05%
	Other Metal	0.2%	0.09%
Textiles		**0.6%**	**0.41%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.6%	0.41%
HHW		**0.2%**	**0.21%**
	Household Hazardous Waste materials	0.2%	0.21%
C&D		**0.9%**	**0.68%**
	Construction and Demolition materials	0.9%	0.68%
Total Percentage		100.0%	

2.3.5.2 Recovered GSD ICI MSW

Figure 2-9 shows the percentage, by weight, of each of the ten material classes for the recovered GSD ICI MSW subsector. Paper, Plastics, and Misc. Inorganic account for approximately 95.1% (85.9%, 6.5%, and 2.7%, respectively) of the recovered MSW for this subsector.

Figure 2-9. Composition of Recovered GSD ICI MSW by Material Class - Summer

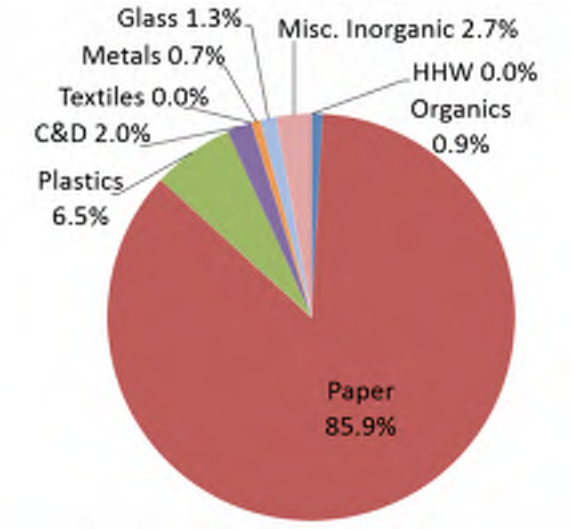


Table 2-16 lists the top ten material categories that were found in the recovered GSD ICI MSW subsector. These ten categories account for approximately 93% of recovered GSD ICI MSW. Uncoated OCC, Mixed Paper - Recyclable, and Boxboard material categories account for 79.6% (67.3%, 8.1%, and 4.1%, respectively) of recovered GSD ICI MSW.

Table 2-16. Top Ten Individual Material Categories in Recovered GSD ICI MSW - Summer

Category	Waste Composition %	Cum. %
Uncoated OCC	67.3%	67.3%
Mixed Paper - Recyclable	8.1%	75.5%
Boxboard	4.1%	79.6%
High Grade Office Paper	3.5%	83.1%
Electronic Equipment	2.4%	85.5%
Remainder/ Composite Plastic	2.0%	87.5%
Construction and Demolition materials	2.0%	89.5%
Commercial & Industrial Film	1.6%	91.0%
Glass Bottles and Jars - clear	1.1%	92.1%
#1 PET Bottles/Jars	1.0%	93.1%
Total	**93.1%**	

Table 2-17 provides the composition profile of recovered GSD ICI MSW.

Table 2-17. Composition Profile of Recovered Rural ICI Materials

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**85.9%**	**53.76%**
	Newsprint	0.8%	1.39%
	High Grade Office Paper	3.5%	5.74%
	Magazines/Catalogs	0.6%	1.04%
	Uncoated OCC	67.3%	41.45%
	Kraft	0.3%	0.39%
	Boxboard	4.1%	2.52%
	Mixed Paper - Recyclable	8.1%	10.09%
	Compostable Paper and 'other' paper	1.0%	1.04%
	Milk and Juice cartons/boxes, coated	0.0%	0.00%
Plastics		**6.5%**	**3.52%**
	#1 PET Bottles/Jars	1.0%	1.09%
	#1 Other PET Containers & Packaging	0.0%	0.00%
	#2 HDPE Bottles/Jars - Clear	0.2%	0.17%
	#2 HDPE Bottles/ Jars - Color	0.3%	0.52%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	0.2%	0.13%
	#3-#7 Other - All	0.2%	0.13%
	Other Rigid Plastic Products	0.3%	0.35%
	Grocery & Merchandise Bags	0.1%	0.00%
	Trash Bags	0.1%	0.13%
	Commercial & Industrial Film	1.6%	2.31%
	Other Film	0.6%	0.13%
	Remainder/ Composite Plastic	2.0%	2.83%
Glass		**1.3%**	**1.57%**
	Glass Bottles and Jars - clear	1.1%	1.39%
	Glass Bottles and Jars - brown	0.2%	0.17%
	Glass Bottles and Jars - green	0.0%	0.00%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**2.7%**	**4.44%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.3%	0.52%
	Electronic Equipment	2.4%	3.91%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.0%	0.00%
Organics		**0.9%**	**0.26%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.04%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	0.6%	0.13%
	Bottom Fines and Dirt	0.3%	0.35%
	Diapers	0.0%	0.00%
	Other Organic	0.0%	0.00%
Metals		**0.7%**	**0.83%**
	Aluminum Beverage Containers	0.2%	0.09%
	Other Aluminum	0.1%	0.17%
	Ferrous containers (bi-metal cans)	0.4%	0.52%
	Aerosol cans	0.0%	0.00%
	Other Ferrous	0.0%	0.04%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.0%	0.00%
Textiles		**0.0%**	**0.00%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.0%	0.00%
HHW		**0.0%**	**0.00%**
	Household Hazardous Waste materials	0.0%	0.00%
C&D		**2.0%**	**3.22%**
	Construction and Demolition materials	2.0%	3.22%
Total Percentage		100.0%	

2.3.5.3 Recovered GSD Residential/ICI MSW Composition

Figure 2-10 shows the percentage, by weight, of each of the ten material classes for the recovered GSD residential/ICI MSW sector. Paper, Plastics, and Metals account for approximately 93.2% (76.4%, 13.6%, and 3.2%, respectively) of the recovered MSW for this sector.

Figure 2-10. Composition of Recovered GSD Residential/ICI MSW by Material Class - Summer

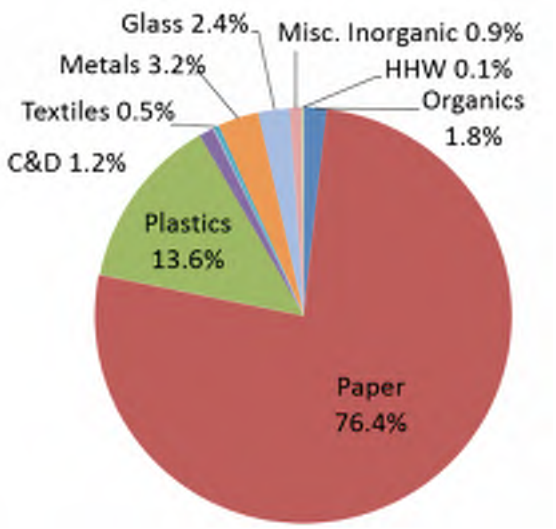


Table 2-18 lists the top ten material categories that were found in the recovered GSD residential/ICI MSW sector. These ten categories account for approximately 82% of recovered GSD residential/ICI MSW. Uncoated OCC, Newsprint, and Mixed Paper - Recyclable material categories account for 55% (37.3%, 9.7%, and 8%, respectively) of recovered GSD residential/ICI MSW.

Table 2-18. Top Ten Individual Material Categories in Recovered GSD Residential/ICI MSW - Summer

Category	Waste Composition %	Cum. %
Uncoated OCC	37.3%	37.3%
Newsprint	9.7%	47.0%
Mixed Paper - Recyclable	8.0%	55.0%
Boxboard	7.3%	62.3%
Magazines/Catalogs	5.9%	68.2%
#1 PET Bottles/Jars	4.1%	72.4%
High Grade Office Paper	3.7%	76.1%
Compostable Paper and 'other' paper	2.7%	78.8%
Other Film	1.6%	80.4%
Kraft	1.5%	81.9%
Total	**81.9%**	

Table 2-19 provides the composition profile of recovered GSD residential/ICI MSW.

Table 2-19. Composition Profile of Recovered Rural Residential/ICI Materials

Summer Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**76.4%**	**6.08%**
	Newsprint	9.7%	3.34%
	High Grade Office Paper	3.7%	0.71%
	Magazines/Catalogs	5.9%	1.37%
	Uncoated OCC	37.3%	4.44%
	Kraft	1.5%	0.35%
	Boxboard	7.3%	1.25%
	Mixed Paper - Recyclable	8.0%	1.26%
	Compostable Paper and 'other' paper	2.7%	0.53%
	Milk and Juice cartons/boxes, coated	0.3%	0.08%
Plastics		**13.6%**	**1.68%**
	#1 PET Bottles/Jars	4.1%	0.72%
	#1 Other PET Containers & Packaging	0.7%	0.25%
	#2 HDPE Bottles/Jars - Clear	1.0%	0.28%
	#2 HDPE Bottles/ Jars - Color	1.2%	0.31%
	#2 Other HDPE Containers & Packaging	0.1%	0.05%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.06%
	#3-#7 Other - All	1.2%	0.29%
	Other Rigid Plastic Products	1.0%	0.26%
	Grocery & Merchandise Bags	0.4%	0.08%
	Trash Bags	0.3%	0.06%
	Commercial & Industrial Film	0.4%	0.17%
	Other Film	1.6%	0.47%
	Remainder/ Composite Plastic	1.2%	0.54%
Glass		**2.4%**	**0.65%**
	Glass Bottles and Jars - clear	1.2%	0.29%
	Glass Bottles and Jars - brown	0.8%	0.29%
	Glass Bottles and Jars - green	0.2%	0.16%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.2%	0.18%
	Other Glass	0.0%	0.04%

		Mean	+/-
Misc. Inorganic		**0.9%**	**0.36%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.04%
	Electronic Equipment	0.7%	0.29%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.1%	0.15%
Organics		**1.8%**	**0.66%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.5%	0.55%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	0.8%	0.34%
	Bottom Fines and Dirt	0.3%	0.05%
	Diapers	0.2%	0.23%
	Other Organic	0.0%	0.02%
Metals		**3.2%**	**0.55%**
	Aluminum Beverage Containers	1.2%	0.34%
	Other Aluminum	0.3%	0.19%
	Ferrous containers (bi-metal cans)	1.2%	0.24%
	Aerosol cans	0.1%	0.04%
	Other Ferrous	0.3%	0.19%
	Other Non-Ferrous	0.1%	0.03%
	Other Metal	0.1%	0.05%
Textiles		**0.5%**	**0.22%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.5%	0.22%
HHW		**0.1%**	**0.11%**
	Household Hazardous Waste materials	0.1%	0.11%
C&D		**1.2%**	**0.43%**
	Construction and Demolition materials	1.2%	0.43%
Total Percentage		100.0%	

Section 3

Landfilled MSW Characterization Fall Sampling Event

3.1 Objective

This section develops composition estimates for landfilled MSW generated within Nashville and Davidson County. All of the results in this section were generated from waste samples taken at the Republic Transfer Station and Waste Management Antioch Transfer Station.

The following sections discuss the methodology used to obtain representative MSW composition estimates. This includes the study parameters, the number and allocation of samples, the solid waste facilities where sampling activities were conducted, and the basis for selecting waste samples. Sampling activities were completed in accordance with CDM Smith's Work Plan, dated July 2017 (**Appendix A**). The goal of the of the two-season study was to sort and characterize 200 samples of waste from the residential and ICI sectors of MSW. Sampling was planned to be equally split between residential and ICI sectors (50/50).

3.2 Methodology

Section 1.2 presents a summary of the data collection methods and calculation procedures used in this study. Refer to Section 1.2 for details on ASTM standard, material category definitions, and calculation procedures. This section summarizes the sample allocation for the fall sampling event.

To ensure that samples were representative of Davidson County's waste stream, sampling was conducted two transfer stations. The transfer stations service both USD and GSD communities in Davidson County, as shown on **Figure 1-1,** to provide data for USD and non-USD MSW sectors. The overall goal of the two-season study for sample distribution between Metro trucks and private trucks is 25% Metro and 75% privates for the MSW sorts. During the fall 2017 sampling event, sample distribution was 28.3% Metro and 71.7% private.

At each facility, characterizations of samples were performed. The total number of samples processed at each site was maximized to the extent possible with the allocated field staff; however, the number varied based on the number of loads available that particular day, site conditions, site staff assistance, weather conditions, the time that loads were delivered to the site, and a number of other factors. Samples collected as part of the MSW characterization sampling were generally allocated equally between the residential and ICI sectors, corresponding to the approximate ratio of disposed quantities for each sector.

CDM Smith conducted the fall 2017 sampling event two transfer stations, over 10 days between October 9, 2017 and October 20, 2017. A total of 99 waste samples from the Residential and ICI waste sector were hand-sorted and characterized.

Table 3-1 summarizes the samples that were used to determine the landfilled MSW composition. A total of 99 waste samples were collected from the residential and commercial waste sectors in fall 2017. Of the 99 samples collected, 47 (47%) were samples of commercial waste (ICI), and 52 (53%) were samples of residential waste, of those samples a total of 80 (81%) were samples from USD areas and 19 (19%) were samples from GSD areas. **Figure 3-1** illustrates the geographic distribution and waste sectors sampled during the fall 2017 event.

Table 3-1. Number of Landfilled Samples by Waste Sector - Fall

Sampling Group	Sample Count		Total Sample Wt.	Mean Sample Wt.
	No.	%	(pounds)	
Residential	47	100%	10,811	230.0
USD	*33*	*70.2%*	*7,429*	*225.1*
GSD	*14*	*29.8%*	*3,382*	*241.6*
ICI	52	100%	11,752	226.0
USD	*47*	*90.4%*	*10,654*	*226.7*
GSD	*5*	*9.6%*	*1,098*	*219.6*
Total Res/ICI	99	100%	22,563	227.9

3.3 MSW Characterization Results

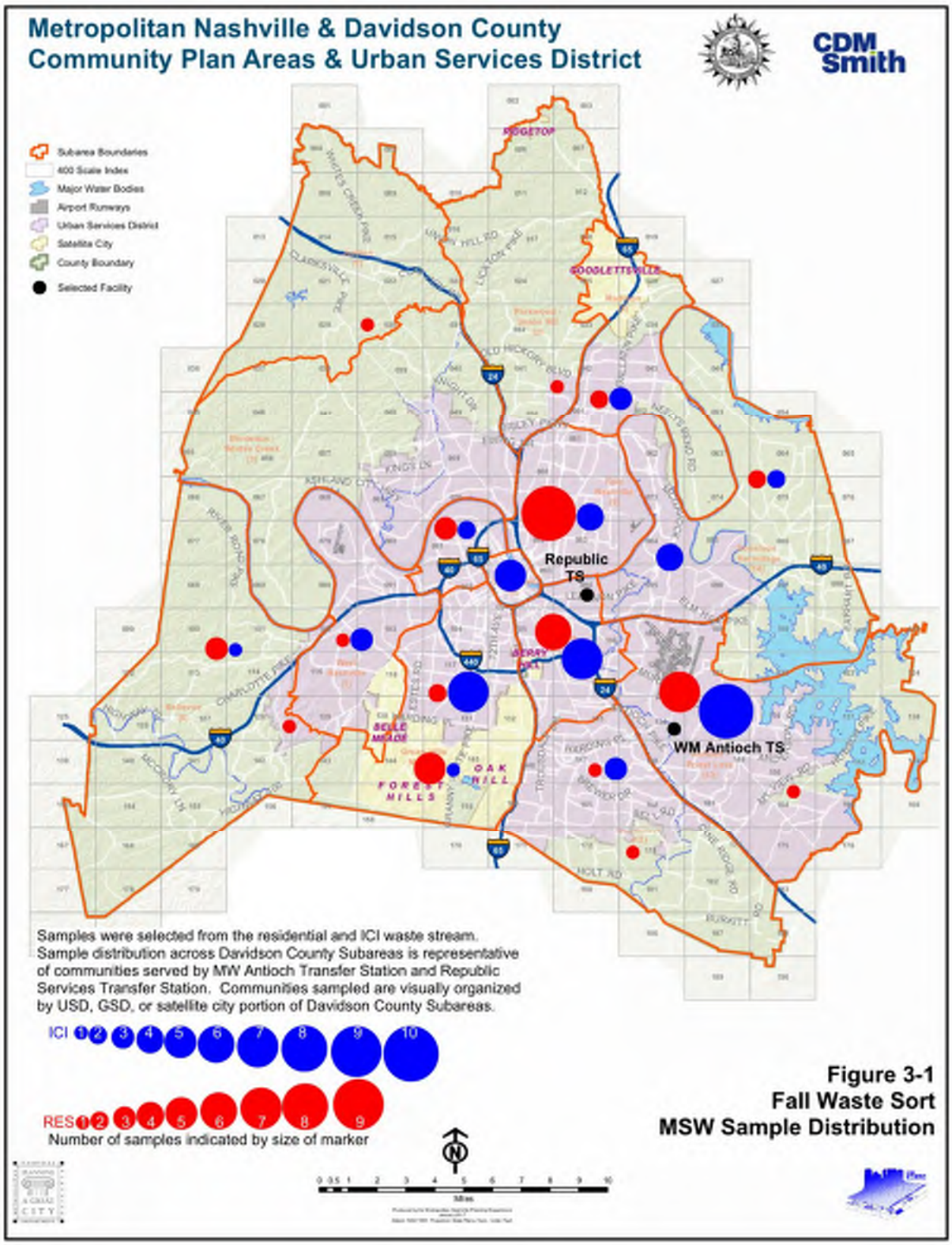
The MSW characterization results from the fall 2017 event are provided in this section. **Table 3-1** summarizes the sample information for each of the study's sampling groups and sectors. The goal for this event was to characterize 100 samples with a sample size of between 200 and 300 lbs (ASTM D5231). During the fall 2017 event, 99 waste samples were selected and hand sorted at the two TS facilities in Davidson County. The sample sizes and numbers were within the Work Plan goals. The average sample weight for the 99 samples was 228 pounds. A total of 22,563 pounds of MSW was sorted and classified during the fall 2017 sampling event.

In the following sections, the landfilled MSW composition results are presented for the ICI and residential waste sectors. The combined residential/ICI composition was determined by weighting the ICI and residential sampling results by using the ratio of residential to ICI MSW determined by the gatehouse surveys. The equation used for weighting samples is provided in the Work Plan.

Each composition profile is presented as follows:

- A pie chart depicting the nine material classes by weight (i.e., Paper, Plastic, Organics, Textiles, Glass, C&D, Metal, Inorganics, and HHW);
- A list of the ten largest material categories by weight (e.g., Food Scraps, High Grade Office Paper, Televisions, etc.), where waste composition percentages are rounded to the nearest tenth and cumulative totals represent the sum of unrounded results;
- A comprehensive table detailing the full composition results for the entire 50 material categories.

Figure 3-1. Fall 2017 MSW Sample Distribution



3.3.1 Landfilled Residential MSW Composition

Figure 3-2 shows the percentage, by weight, of each of the nine material classes for the landfilled residential MSW sector. Organics, Paper, and Plastics account approximately 72% (30.8%, 25.4%, and 15.6%, respectively) of the landfilled residential MSW for this sector.

Figure 3-2. Composition of Landfilled Residential MSW by Material Class - Fall

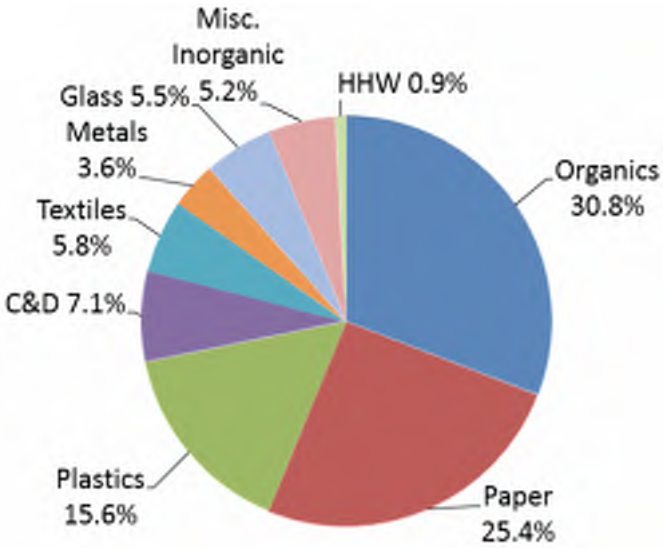


Table 3-2 lists the top ten material categories that were found in the landfilled residential MSW sector. These ten categories account for approximately 62% of landfilled residential MSW. Food Scraps, Compostable Paper and 'other' paper, and Construction and Demolition materials material categories account for 35.9% (19.1%, 9.6%, and 7.1%, respectively) of landfilled residential MSW.

Table 3-2. Top Ten Individual Material Categories in Landfilled Residential MSW - Fall

Category	Waste Composition %	Cum. %
Food Scraps	19.1%	19.1%
Compostable Paper and 'other' paper	9.6%	28.8%
Construction and Demolition materials	7.1%	35.9%
Clothing and other textiles	4.3%	40.2%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	4.1%	44.3%
Uncoated OCC	3.9%	48.2%
Diapers	3.6%	51.8%
Yard Waste - Compostable; leaves, grass, branches <0.5"	3.5%	55.3%
Mixed Paper - Recyclable	3.3%	58.6%
Other Organic	3.2%	61.8%
Total	**61.8%**	

Table 3-3 provides a composition profile of landfilled residential MSW.

Table 3-3. Composition Profile of Landfilled Residential MSW

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**25.4%**	**2.21%**
	Newsprint	1.3%	0.39%
	High Grade Office Paper	1.2%	0.57%
	Magazines/Catalogs	2.5%	0.57%
	Uncoated OCC	3.9%	0.79%
	Kraft	0.5%	0.14%
	Boxboard	3.0%	0.31%
	Mixed Paper - Recyclable	3.3%	0.48%
	Compostable Paper and 'other' paper	9.6%	1.03%
	Milk and Juice cartons/boxes, coated	0.1%	0.04%
Plastics		**15.6%**	**1.23%**
	#1 PET Bottles/Jars	2.2%	0.25%
	#1 Other PET Containers & Packaging	0.5%	0.11%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.07%
	#2 HDPE Bottles/ Jars - Color	0.8%	0.14%
	#2 Other HDPE Containers & Packaging	0.0%	0.04%
	#6 Expanded Polystyrene Packaging (EPS)	1.2%	0.17%
	#3-#7 Other - All	1.6%	0.20%
	Other Rigid Plastic Products	1.6%	0.45%
	Grocery & Merchandise Bags	1.1%	0.15%
	Trash Bags	1.9%	0.29%
	Commercial & Industrial Film	0.6%	0.27%
	Other Film	2.3%	0.21%
	Remainder/ Composite Plastic	1.5%	0.43%
Glass		**5.5%**	**0.77%**
	Glass Bottles and Jars - clear	2.9%	0.40%
	Glass Bottles and Jars - brown	1.6%	0.45%
	Glass Bottles and Jars - green	0.9%	0.26%
	Glass Bottles and Jars - blue	0.0%	0.04%
	Flat Glass	0.0%	0.01%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**5.2%**	**1.88%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.18%
	Electronic Equipment	1.0%	0.55%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	4.1%	1.53%
Organics		**30.8%**	**2.80%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	3.5%	1.57%
	Yard Waste - Woody; branch >0.5"	0.0%	0.03%
	Food Scraps	19.1%	1.81%
	Bottom Fines and Dirt	1.3%	0.62%
	Diapers	3.6%	0.79%
	Other Organic	3.2%	0.76%
Metals		**3.6%**	**0.65%**
	Aluminum Beverage Containers	0.8%	0.16%
	Other Aluminum	0.4%	0.10%
	Ferrous containers (bi-metal cans)	1.3%	0.21%
	Aerosol cans	0.2%	0.06%
	Other Ferrous	0.7%	0.50%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.2%	0.17%
Textiles		**5.8%**	**1.24%**
	Carpet and carpet padding	1.4%	0.93%
	Clothing and other textiles	4.3%	0.84%
HHW		**0.9%**	**0.46%**
	Household Hazardous Waste materials	0.9%	0.46%
C&D		**7.1%**	**3.24%**
	Construction and Demolition materials	7.1%	3.24%
Total Percentage		100.0%	

3.3.2 Landfilled ICI MSW Composition

Figure 3-3 shows the percentage, by weight, of each of the nine material classes for the landfilled ICI MSW sector. Paper, Organics, and Plastics account for approximately 67% (28.4%, 21.1%, and 17.1%, respectively) of the landfilled MSW for this sector.

Figure 3-3. Composition of Landfilled ICI MSW by Material Class - Fall

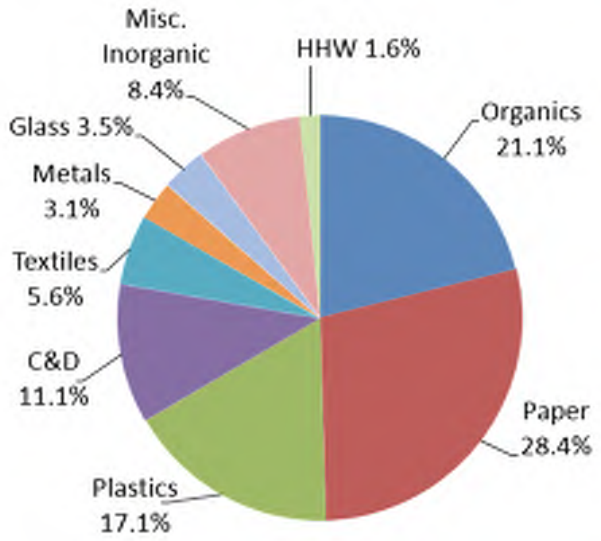


Table 3-4 lists the top ten material categories that were found in the landfilled ICI MSW sector. These ten categories account for approximately 68% of landfilled ICI MSW. Food Scraps, Construction and Demolition materials, and Compostable Paper and 'other' paper material categories account for 35.1% (15%, 11.1%, and 9%, respectively) of landfilled ICI MSW.

Table 3-4. Top Ten Individual Material Categories in Landfilled ICI MSW - Fall

Category	Waste Composition %	Cum. %
Food Scraps	15.0%	15.0%
Construction and Demolition materials	11.1%	26.1%
Compostable Paper and 'other' paper	9.0%	35.1%
Uncoated OCC	8.8%	43.9%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.6%	50.5%
Boxboard	5.2%	55.7%
Clothing and other textiles	4.9%	60.6%
Trash Bags	3.1%	63.7%
Other Film	2.4%	66.1%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.2%	68.3%
Total	**68.3%**	

Table 3-5 provides the composition profile of the landfilled ICI MSW sector.

Table 3-5. Composition Profile of Landfilled ICI MSW

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**28.4%**	**3.40%**
	Newsprint	0.5%	0.27%
	High Grade Office Paper	1.2%	0.38%
	Magazines/Catalogs	1.0%	0.33%
	Uncoated OCC	8.8%	1.87%
	Kraft	0.7%	0.55%
	Boxboard	5.2%	2.83%
	Mixed Paper - Recyclable	1.9%	0.52%
	Compostable Paper and 'other' paper	9.0%	1.44%
	Milk and Juice cartons/boxes, coated	0.1%	0.03%
Plastics		**17.1%**	**2.98%**
	#1 PET Bottles/Jars	1.5%	0.25%
	#1 Other PET Containers & Packaging	0.4%	0.15%
	#2 HDPE Bottles/Jars - Clear	0.5%	0.47%
	#2 HDPE Bottles/ Jars - Color	0.8%	0.69%
	#2 Other HDPE Containers & Packaging	0.0%	0.05%
	#6 Expanded Polystyrene Packaging (EPS)	0.9%	0.18%
	#3-#7 Other - All	1.2%	0.26%
	Other Rigid Plastic Products	1.9%	0.80%
	Grocery & Merchandise Bags	0.7%	0.16%
	Trash Bags	3.1%	2.11%
	Commercial & Industrial Film	1.9%	0.95%
	Other Film	2.4%	0.41%
	Remainder/ Composite Plastic	1.8%	0.84%
Glass		**3.5%**	**0.96%**
	Glass Bottles and Jars - clear	1.8%	0.53%
	Glass Bottles and Jars - brown	0.6%	0.24%
	Glass Bottles and Jars - green	1.0%	0.44%
	Glass Bottles and Jars - blue	0.0%	0.03%
	Flat Glass	0.1%	0.08%
	Other Glass	0.0%	0.01%

		Mean	+/-
Misc. Inorganic		**8.4%**	**3.33%**
	Televisions	1.2%	1.11%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.17%
	Electronic Equipment	0.5%	0.36%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.6%	3.04%
Organics		**21.1%**	**4.38%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.2%	1.84%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	15.0%	3.51%
	Bottom Fines and Dirt	1.0%	0.77%
	Diapers	2.1%	0.71%
	Other Organic	0.8%	0.35%
Metals		**3.1%**	**0.73%**
	Aluminum Beverage Containers	0.6%	0.13%
	Other Aluminum	0.3%	0.14%
	Ferrous containers (bi-metal cans)	0.5%	0.27%
	Aerosol cans	0.1%	0.04%
	Other Ferrous	1.3%	0.58%
	Other Non-Ferrous	0.0%	0.03%
	Other Metal	0.3%	0.18%
Textiles		**5.6%**	**1.60%**
	Carpet and carpet padding	0.7%	0.67%
	Clothing and other textiles	4.9%	1.44%
HHW		**1.6%**	**0.98%**
	Household Hazardous Waste materials	1.6%	0.98%
C&D		**11.1%**	**3.71%**
	Construction and Demolition materials	11.1%	3.71%
Total Percentage		100.0%	

3.3.3 Landfilled Combined Residential/ICI MSW Composition

Figure 3-4 shows the percentage, by weight, of each of the nine material classes for the combined residential and ICI MSW sectors. Paper, Organics, and Plastics account for approximately 68% (27.4%, 24.4%, and 16.6%, respectively) of the landfilled combined residential/ICI MSW.

Figure 3-4. Composition of Landfilled Combined Residential/ICI MSW by Material Class - Fall

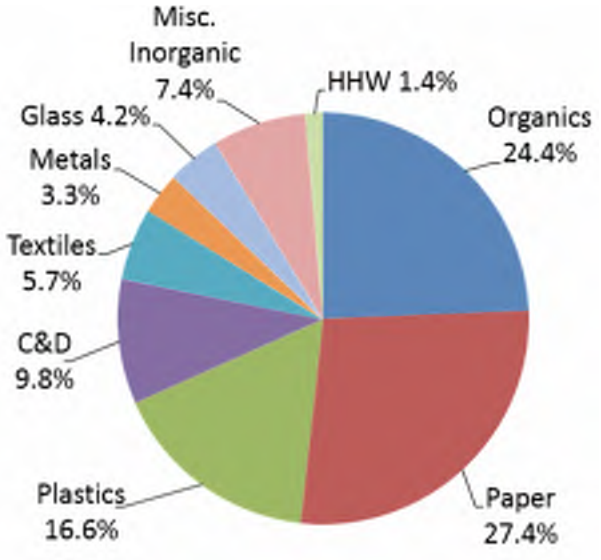


Table 3-6 lists the top ten material categories that were found in the landfilled combined residential/ ICI MSW. These ten categories account for approximately 65% of landfilled residential/ICI MSW. Food Scraps, Construction and Demolition materials, and Compostable Paper and 'other' paper material categories account for 35.4% (16.4%, 9.8%, and 9.2%, respectively) of landfilled residential/ICI MSW.

Table 3-6. Top Ten Individual Material Categories in Landfilled Combined Residential/ICI MSW - Fall

Category	Waste Composition %	Cum. %
Food Scraps	16.4%	16.4%
Construction and Demolition materials	9.8%	26.2%
Compostable Paper and 'other' paper	9.2%	35.4%
Uncoated OCC	7.2%	42.6%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.7%	48.3%
Clothing and other textiles	4.7%	53.0%
Boxboard	4.5%	57.5%
Trash Bags	2.7%	60.2%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.6%	62.8%
Diapers	2.6%	65.4%
Total	**65.4%**	

Table 3-7 provides the composition profile of the landfilled combined residential/ICI MSW.

Table 3-7. Composition Profile of Landfilled Residential/ICI MSW

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**27.4%**	**1.53%**
	Newsprint	0.7%	0.13%
	High Grade Office Paper	1.2%	0.18%
	Magazines/Catalogs	1.5%	0.16%
	Uncoated OCC	7.2%	0.84%
	Kraft	0.6%	0.24%
	Boxboard	4.5%	1.26%
	Mixed Paper - Recyclable	2.4%	0.24%
	Compostable Paper and 'other' paper	9.2%	0.65%
	Milk and Juice cartons/boxes, coated	0.1%	0.02%
Plastics		**16.6%**	**1.33%**
	#1 PET Bottles/Jars	1.7%	0.12%
	#1 Other PET Containers & Packaging	0.4%	0.07%
	#2 HDPE Bottles/Jars - Clear	0.5%	0.21%
	#2 HDPE Bottles/ Jars - Color	0.8%	0.31%
	#2 Other HDPE Containers & Packaging	0.0%	0.02%
	#6 Expanded Polystyrene Packaging (EPS)	1.0%	0.08%
	#3-#7 Other - All	1.3%	0.12%
	Other Rigid Plastic Products	1.8%	0.36%
	Grocery & Merchandise Bags	0.9%	0.07%
	Trash Bags	2.7%	0.94%
	Commercial & Industrial Film	1.4%	0.42%
	Other Film	2.3%	0.18%
	Remainder/ Composite Plastic	1.7%	0.38%
Glass		**4.2%**	**0.44%**
	Glass Bottles and Jars - clear	2.2%	0.24%
	Glass Bottles and Jars - brown	0.9%	0.12%
	Glass Bottles and Jars - green	0.9%	0.20%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.1%	0.04%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**7.4%**	**1.50%**
	Televisions	0.8%	0.50%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.08%
	Electronic Equipment	0.7%	0.17%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.7%	1.36%
Organics		**24.4%**	**1.97%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.6%	0.84%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	16.4%	1.57%
	Bottom Fines and Dirt	1.1%	0.35%
	Diapers	2.6%	0.33%
	Other Organic	1.6%	0.18%
Metals		**3.3%**	**0.33%**
	Aluminum Beverage Containers	0.7%	0.06%
	Other Aluminum	0.3%	0.06%
	Ferrous containers (bi-metal cans)	0.8%	0.12%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	1.1%	0.26%
	Other Non-Ferrous	0.0%	0.02%
	Other Metal	0.3%	0.08%
Textiles		**5.7%**	**0.73%**
	Carpet and carpet padding	1.0%	0.31%
	Clothing and other textiles	4.7%	0.65%
HHW		**1.4%**	**0.44%**
	Household Hazardous Waste materials	1.4%	0.44%
C&D		**9.8%**	**1.69%**
	Construction and Demolition materials	9.8%	1.69%
Total Percentage		100.0%	

Summing the recoverable materials categories from Papers, Plastics, Glass, and metals as defined in this study's material categories, the fall sort data indicates 31.3% of the landfilled materials were recoverable.

3.3.4 Landfilled USD MSW Composition

In determining the landfilled USD MSW composition for residential and ICI MSW sectors, the samples were identified based on collection route within the USD. Out of 99 samples, a total of 80 (81%) of the samples were collected from the USD MSW sector. 33 (41.3%) USD samples were collected from residential MSW and 47 (58.8%) USD samples were collected from ICI MSW.

3.3.4.1 Landfilled USD Residential MSW

Figure 3-5 shows the percentage, by weight, of each of the ten material classes for the landfilled USD residential MSW subsector. Organics, Paper, and Plastics account for approximately 69% (29.3%, 24.0%, and 15.7%, respectively) of the landfilled MSW for this sector.

Figure 3-5. Composition of Landfilled USD Residential MSW by Material Class - Fall

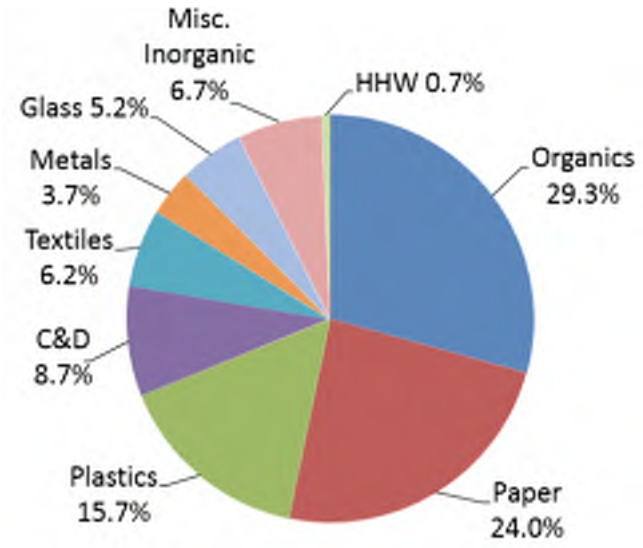


Table 3-8 lists the top ten material categories that were found in the landfilled USD residential MSW subsector. These ten categories account for approximately 64% of landfilled USD residential MSW. Food Scraps, Compostable Paper and 'other' paper, and Construction and Demolition materials material categories account for 36% (17.9%, 9.4%, and 8.7%, respectively) of landfilled USD residential MSW.

Table 3-8. Top Ten Individual Material Categories in Landfilled USD Residential MSW - Fall

Category	Waste Composition %	Cum. %
Food Scraps	17.9%	17.9%
Compostable Paper and 'other' paper	9.4%	27.3%
Construction and Demolition materials	8.7%	36.0%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.7%	41.6%
Clothing and other textiles	4.7%	46.4%
Diapers	3.7%	50.1%
Uncoated OCC	3.6%	53.7%
Yard Waste - Compostable; leaves, grass, branches <0.5"	3.5%	57.2%
Mixed Paper - Recyclable	3.5%	60.7%
Glass Bottles and Jars - clear	3.0%	63.6%
Total	**63.6%**	

Table 3-9 provides the composition profile of landfilled USD residential MSW.

Table 3-9. Composition Profile of Landfilled Urban Residential MSW

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**24.0%**	**2.46%**
	Newsprint	0.9%	0.32%
	High Grade Office Paper	1.3%	0.82%
	Magazines/Catalogs	2.1%	0.68%
	Uncoated OCC	3.6%	0.78%
	Kraft	0.4%	0.17%
	Boxboard	2.8%	0.38%
	Mixed Paper - Recyclable	3.5%	0.58%
	Compostable Paper and 'other' paper	9.4%	1.00%
	Milk and Juice cartons/boxes, coated	0.1%	0.03%
Plastics		**15.7%**	**0.91%**
	#1 PET Bottles/Jars	2.1%	0.26%
	#1 Other PET Containers & Packaging	0.5%	0.16%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.08%
	#2 HDPE Bottles/ Jars - Color	0.8%	0.18%
	#2 Other HDPE Containers & Packaging	0.1%	0.06%
	#6 Expanded Polystyrene Packaging (EPS)	1.3%	0.22%
	#3-#7 Other - All	1.4%	0.19%
	Other Rigid Plastic Products	1.7%	0.56%
	Grocery & Merchandise Bags	1.1%	0.19%
	Trash Bags	1.9%	0.33%
	Commercial & Industrial Film	0.5%	0.18%
	Other Film	2.1%	0.24%
	Remainder/ Composite Plastic	1.7%	0.59%
Glass		**5.2%**	**0.95%**
	Glass Bottles and Jars - clear	3.0%	0.48%
	Glass Bottles and Jars - brown	1.5%	0.56%
	Glass Bottles and Jars - green	0.7%	0.27%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.01%
	Other Glass	0.0%	0.04%

		Mean	+/-
Misc. Inorganic		**6.7%**	**2.59%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.18%
	Electronic Equipment	0.9%	0.69%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.7%	2.09%
Organics		**29.3%**	**3.30%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	3.5%	1.88%
	Yard Waste - Woody; branch >0.5"	0.0%	0.04%
	Food Scraps	17.9%	2.19%
	Bottom Fines and Dirt	1.2%	0.38%
	Diapers	3.7%	0.98%
	Other Organic	2.9%	0.86%
Metals		**3.7%**	**0.80%**
	Aluminum Beverage Containers	0.8%	0.19%
	Other Aluminum	0.3%	0.06%
	Ferrous containers (bi-metal cans)	1.2%	0.18%
	Aerosol cans	0.2%	0.07%
	Other Ferrous	0.8%	0.72%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.2%	0.23%
Textiles		**6.2%**	**1.47%**
	Carpet and carpet padding	1.4%	1.07%
	Clothing and other textiles	4.7%	1.07%
HHW		**0.7%**	**0.32%**
	Household Hazardous Waste materials	0.7%	0.32%
C&D		**8.7%**	**4.50%**
	Construction and Demolition materials	8.7%	4.50%
Total Percentage		100.0%	

3.3.4.2 Landfilled USD ICI MSW

Figure 3-6 shows the percentage, by weight, of each of the ten material classes for the landfilled USD ICI MSW subsector. Paper, Organics, and Plastics account for 65.31% (27.56%, 20.1%, and 17.65%, respectively) of the landfilled MSW for this subsector.

Figure 3-6. Composition of Landfilled USD ICI MSW by Material Class - Fall

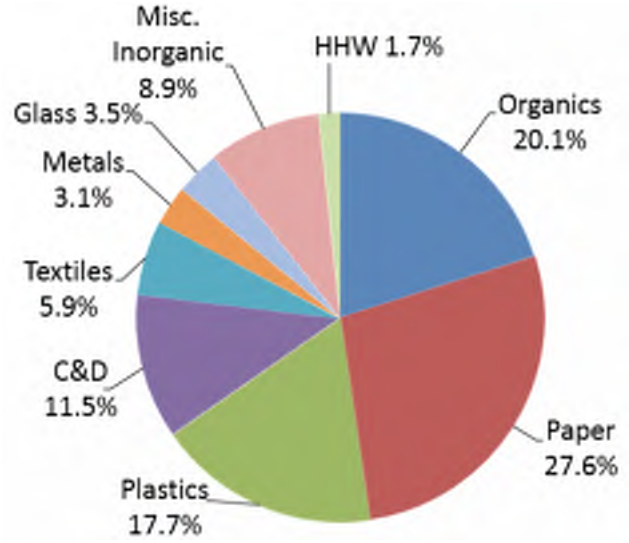


Table 3-10 lists the top ten material categories that were found in the landfilled USD ICI MSW subsector. These ten categories account for approximately 68% of the landfilled USD ICI MSW. Food Scraps, Construction and Demolition materials, and Uncoated OCC material categories account for 35.6% (14.8%, 11.5%, and 9.3%, respectively) of landfilled USD ICI MSW.

Table 3-10. Top Ten Individual Material Categories in Landfilled USD ICI MSW - Fall

Category	Waste Composition %	Cum. %
Food Scraps	14.8%	14.8%
Construction and Demolition materials	11.5%	26.3%
Uncoated OCC	9.3%	35.6%
Compostable Paper and 'other' paper	8.9%	44.5%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.9%	51.4%
Clothing and other textiles	5.2%	56.6%
Boxboard	3.9%	60.6%
Trash Bags	3.3%	63.9%
Other Film	2.3%	66.2%
Other Rigid Plastic Products	2.1%	68.2%
Total	**68.2%**	

Table 3-11 provides the composition profile of the landfilled USD ICI MSW sector.

Table 3-11. Composition Profile of Landfilled Urban ICI MSW

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**27.6%**	**3.32%**
	Newsprint	0.4%	0.29%
	High Grade Office Paper	1.2%	0.41%
	Magazines/Catalogs	1.0%	0.35%
	Uncoated OCC	9.3%	2.02%
	Kraft	0.7%	0.60%
	Boxboard	3.9%	2.06%
	Mixed Paper - Recyclable	2.0%	0.56%
	Compostable Paper and 'other' paper	8.9%	1.53%
	Milk and Juice cartons/boxes, coated	0.1%	0.03%
Plastics		**17.7%**	**3.22%**
	#1 PET Bottles/Jars	1.4%	0.27%
	#1 Other PET Containers & Packaging	0.4%	0.16%
	#2 HDPE Bottles/Jars - Clear	0.6%	0.52%
	#2 HDPE Bottles/ Jars - Color	0.8%	0.77%
	#2 Other HDPE Containers & Packaging	0.0%	0.06%
	#6 Expanded Polystyrene Packaging (EPS)	0.9%	0.19%
	#3-#7 Other - All	1.2%	0.28%
	Other Rigid Plastic Products	2.1%	0.88%
	Grocery & Merchandise Bags	0.7%	0.17%
	Trash Bags	3.3%	2.32%
	Commercial & Industrial Film	2.1%	1.04%
	Other Film	2.3%	0.43%
	Remainder/ Composite Plastic	1.9%	0.92%
Glass		**3.5%**	**1.04%**
	Glass Bottles and Jars - clear	1.8%	0.57%
	Glass Bottles and Jars - brown	0.6%	0.26%
	Glass Bottles and Jars - green	0.9%	0.48%
	Glass Bottles and Jars - blue	0.0%	0.03%
	Flat Glass	0.1%	0.09%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**8.9%**	**3.63%**
	Televisions	1.4%	1.23%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.19%
	Electronic Equipment	0.5%	0.39%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.9%	3.32%
Organics		**20.1%**	**4.55%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	1.9%	1.83%
	Yard Waste - Woody; branch >0.5"	0.0%	0.02%
	Food Scraps	14.8%	3.78%
	Bottom Fines and Dirt	1.1%	0.84%
	Diapers	1.7%	0.65%
	Other Organic	0.7%	0.30%
Metals		**3.1%**	**0.79%**
	Aluminum Beverage Containers	0.6%	0.14%
	Other Aluminum	0.3%	0.16%
	Ferrous containers (bi-metal cans)	0.5%	0.30%
	Aerosol cans	0.1%	0.05%
	Other Ferrous	1.4%	0.63%
	Other Non-Ferrous	0.0%	0.04%
	Other Metal	0.2%	0.14%
Textiles		**5.9%**	**1.73%**
	Carpet and carpet padding	0.7%	0.71%
	Clothing and other textiles	5.2%	1.56%
HHW		**1.7%**	**1.07%**
	Household Hazardous Waste materials	1.7%	1.07%
C&D		**11.5%**	**4.03%**
	Construction and Demolition materials	11.5%	4.03%
Total Percentage		100.0%	

3.3.4.3 Landfilled USD Residential/ICI MSW Composition

Figure 3-7 shows the percentage, by weight, of each of the ten material classes for the landfilled USD residential/ICI MSW sector. Paper, Organics, and Plastics account for approximately 67% (26.4%, 23.2%, and 17.0%, respectively) of the landfilled MSW for this sector.

Figure 3-7. Composition of Landfilled USD Residential/ICI MSW by Material Class - Fall

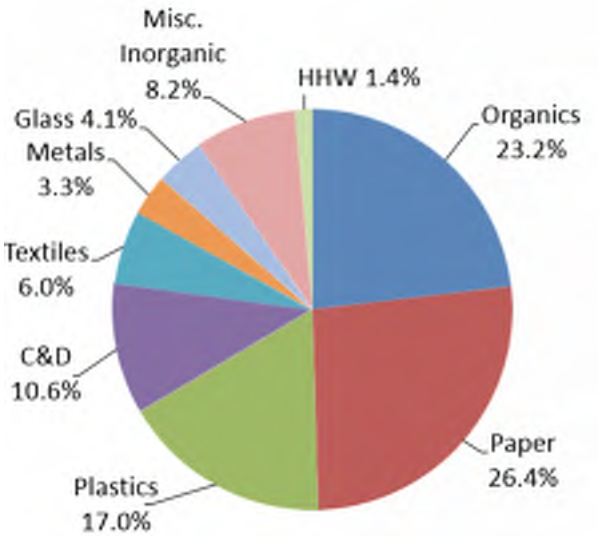


Table 3-12 lists the top ten material categories that were found in the landfilled USD residential/ICI MSW sector. These ten categories account for approximately 65.7% of landfilled USD MSW. Food Scraps, Construction and Demolition materials, and Compostable Paper and 'other' paper material categories account for 35.5% (15.8%, 10.6%, and 9%, respectively) of landfilled USD residential/ICI MSW.

Table 3-12. Top Ten Individual Material Categories in Landfilled USD Residential/ICI MSW - Fall

Category	Waste Composition %	Cum. %
Food Scraps	15.8%	15.8%
Construction and Demolition materials	10.6%	26.4%
Compostable Paper and 'other' paper	9.0%	35.5%
Uncoated OCC	7.4%	42.9%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.5%	49.4%
Clothing and other textiles	5.0%	54.4%
Boxboard	3.6%	58.0%
Trash Bags	2.8%	60.8%
Mixed Paper - Recyclable	2.5%	63.3%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.4%	65.7%
Total	**65.7%**	

Table 3-13 provides the composition profile of landfilled USD residential/ICI MSW.

Table 3-13. Composition Profile of Landfilled Urban Residential/ICI MSW

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**26.4%**	**1.50%**
	Newsprint	0.6%	0.13%
	High Grade Office Paper	1.3%	0.20%
	Magazines/Catalogs	1.3%	0.17%
	Uncoated OCC	7.4%	0.90%
	Kraft	0.6%	0.27%
	Boxboard	3.6%	0.92%
	Mixed Paper - Recyclable	2.5%	0.26%
	Compostable Paper and 'other' paper	9.0%	0.69%
	Milk and Juice cartons/boxes, coated	0.1%	0.02%
Plastics		**17.0%**	**1.44%**
	#1 PET Bottles/Jars	1.6%	0.12%
	#1 Other PET Containers & Packaging	0.4%	0.07%
	#2 HDPE Bottles/Jars - Clear	0.5%	0.23%
	#2 HDPE Bottles/ Jars - Color	0.8%	0.34%
	#2 Other HDPE Containers & Packaging	0.0%	0.03%
	#6 Expanded Polystyrene Packaging (EPS)	1.0%	0.09%
	#3-#7 Other - All	1.3%	0.13%
	Other Rigid Plastic Products	2.0%	0.40%
	Grocery & Merchandise Bags	0.8%	0.08%
	Trash Bags	2.8%	1.03%
	Commercial & Industrial Film	1.6%	0.46%
	Other Film	2.2%	0.19%
	Remainder/ Composite Plastic	1.8%	0.41%
Glass		**4.1%**	**0.48%**
	Glass Bottles and Jars - clear	2.2%	0.26%
	Glass Bottles and Jars - brown	0.9%	0.13%
	Glass Bottles and Jars - green	0.9%	0.22%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.1%	0.04%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**8.2%**	**1.64%**
	Televisions	0.9%	0.55%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.09%
	Electronic Equipment	0.6%	0.19%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.5%	1.50%
Organics		**23.2%**	**2.06%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.4%	0.84%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	15.8%	1.70%
	Bottom Fines and Dirt	1.1%	0.38%
	Diapers	2.4%	0.31%
	Other Organic	1.4%	0.16%
Metals		**3.3%**	**0.36%**
	Aluminum Beverage Containers	0.7%	0.06%
	Other Aluminum	0.3%	0.07%
	Ferrous containers (bi-metal cans)	0.8%	0.13%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	1.2%	0.29%
	Other Non-Ferrous	0.0%	0.02%
	Other Metal	0.2%	0.07%
Textiles		**6.0%**	**0.79%**
	Carpet and carpet padding	0.9%	0.34%
	Clothing and other textiles	5.0%	0.71%
HHW		**1.4%**	**0.48%**
	Household Hazardous Waste materials	1.4%	0.48%
C&D		**10.6%**	**1.86%**
	Construction and Demolition materials	10.6%	1.86%
Total Percentage		100.0%	

3.3.5 Landfilled GSD MSW Composition

In determining the landfilled GSD MSW composition for the residential and ICI sectors, the samples were split based on collection route within the GSD (including satellite cities). Out of 99 samples collected, a total of 19 (19%) samples were collected from the GSD MSW sector, 14 (73.7%) GSD samples were collected from the GSD residential MSW subsector and 5 (26.3%) GSD samples were collected from the GSD ICI MSW subsector.

3.3.5.1 Landfilled GSD Residential MSW

Figure 3-8 shows the percentage, by weight, of each of the ten material classes for the landfilled GSD residential MSW subsector. Organics, Paper, and Plastics account for over 78% (34.3%, 28.4%, and 15.6%, respectively) of the total MSW for this sector.

Figure 3-8. Composition of Landfilled GSD Residential MSW by Material Class - Fall

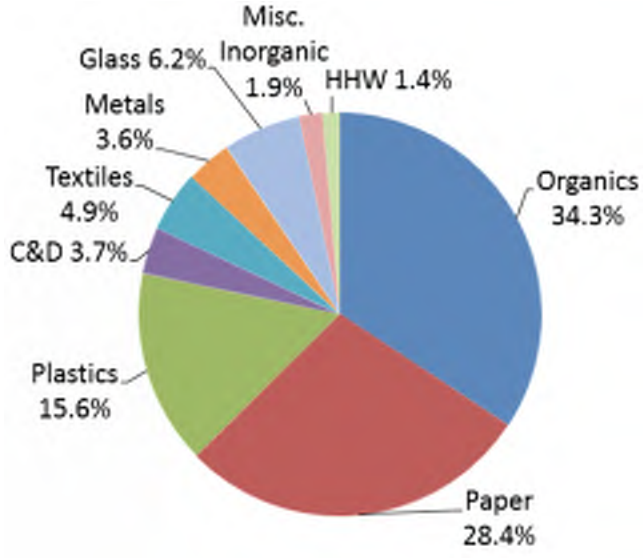


Table 3-14 lists the top ten material categories that were found in the landfilled GSD residential MSW subsector. These ten categories account for approximately 61% of the landfilled GSD residential MSW. Food Scraps, Compostable Paper and 'other' paper, and Uncoated OCC material categories account for 36.6% (21.8%, 10.2%, and 4.5%, respectively) of the landfilled GSD residential MSW.

Table 3-14. Top Ten Individual Material Categories in Landfilled GSD Residential MSW - Fall

Category	Waste Composition %	Cum. %
Food Scraps	21.8%	21.8%
Compostable Paper and 'other' paper	10.2%	32.1%
Uncoated OCC	4.5%	36.6%
Other Organic	4.0%	40.6%
Construction and Demolition materials	3.7%	44.3%
Yard Waste - Compostable; leaves, grass, branches <0.5"	3.5%	47.8%
Clothing and other textiles	3.4%	51.3%
Boxboard	3.4%	54.7%
Magazines/Catalogs	3.4%	58.0%
Diapers	3.3%	61.4%
Total	**61.4%**	

Table 3-15 provides the composition profile of landfilled GSD residential MSW.

Table 3-15. Composition Profile of Landfilled Rural Residential MSW

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**28.4%**	**4.12%**
	Newsprint	2.1%	0.93%
	High Grade Office Paper	0.9%	0.39%
	Magazines/Catalogs	3.4%	0.91%
	Uncoated OCC	4.5%	1.87%
	Kraft	0.8%	0.22%
	Boxboard	3.4%	0.48%
	Mixed Paper - Recyclable	2.8%	0.85%
	Compostable Paper and 'other' paper	10.2%	2.45%
	Milk and Juice cartons/boxes, coated	0.2%	0.11%
Plastics		**15.6%**	**3.45%**
	#1 PET Bottles/Jars	2.3%	0.54%
	#1 Other PET Containers & Packaging	0.6%	0.10%
	#2 HDPE Bottles/Jars - Clear	0.5%	0.13%
	#2 HDPE Bottles/ Jars - Color	0.7%	0.20%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	1.0%	0.24%
	#3-#7 Other - All	1.9%	0.44%
	Other Rigid Plastic Products	1.1%	0.72%
	Grocery & Merchandise Bags	1.1%	0.25%
	Trash Bags	1.8%	0.56%
	Commercial & Industrial Film	0.6%	0.79%
	Other Film	2.7%	0.32%
	Remainder/ Composite Plastic	1.2%	0.52%
Glass		**6.2%**	**1.26%**
	Glass Bottles and Jars - clear	2.8%	0.74%
	Glass Bottles and Jars - brown	1.8%	0.74%
	Glass Bottles and Jars - green	1.5%	0.54%
	Glass Bottles and Jars - blue	0.1%	0.12%
	Flat Glass	0.0%	0.02%
	Other Glass	0.0%	0.02%

		Mean	+/-
Misc. Inorganic		**1.9%**	**1.15%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.41%
	Electronic Equipment	1.1%	0.92%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.6%	0.42%
Organics		**34.3%**	**4.72%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	3.5%	3.00%
	Yard Waste - Woody; branch >0.5"	0.0%	0.02%
	Food Scraps	21.8%	2.65%
	Bottom Fines and Dirt	1.6%	1.83%
	Diapers	3.3%	1.38%
	Other Organic	4.0%	1.49%
Metals		**3.6%**	**1.13%**
	Aluminum Beverage Containers	0.7%	0.27%
	Other Aluminum	0.5%	0.30%
	Ferrous containers (bi-metal cans)	1.6%	0.52%
	Aerosol cans	0.2%	0.14%
	Other Ferrous	0.4%	0.23%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.3%	0.16%
Textiles		**4.9%**	**2.35%**
	Carpet and carpet padding	1.5%	1.90%
	Clothing and other textiles	3.4%	1.29%
HHW		**1.4%**	**1.32%**
	Household Hazardous Waste materials	1.4%	1.32%
C&D		**3.7%**	**2.84%**
	Construction and Demolition materials	3.7%	2.84%
Total Percentage		100.0%	

3.3.5.2 Landfilled GSD ICI MSW

Figure 3-9 shows the percentage, by weight, of each of the ten material classes for the landfilled GSD ICI MSW subsector. Paper, Organics, and Plastics account for approximately 79% (36.3%, 31.3%, and 11.3%, respectively) of the landfilled MSW for this subsector.

Figure 3-9. Composition of Landfilled GSD ICI MSW by Material Class - Fall

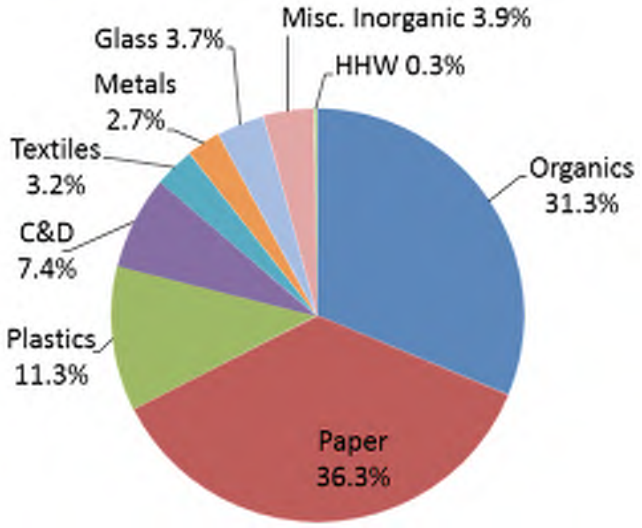


Table 3-16 lists the top ten material categories that were found in the landfilled GSD ICI MSW subsector. These ten categories account for approximately 76% of landfilled GSD ICI MSW. Boxboard, Food Scraps, and Compostable Paper and 'other' paper material categories account for 44.3% (17.5%, 17.1%, and 9.7%, respectively) of landfilled GSD ICI MSW.

Table 3-16. Top Ten Individual Material Categories in Landfilled GSD ICI MSW - Fall

Category	Waste Composition %	Cum. %
Boxboard	17.5%	17.5%
Food Scraps	17.1%	34.6%
Compostable Paper and 'other' paper	9.7%	44.3%
Construction and Demolition materials	7.4%	51.7%
Diapers	6.2%	57.8%
Yard Waste - Compostable; leaves, grass, branches <0.5"	5.4%	63.3%
Uncoated OCC	4.1%	67.4%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	3.2%	70.6%
Other Film	3.0%	73.6%
Glass Bottles and Jars - clear	2.3%	75.8%
Total	**75.8%**	

Table 3-17 provides the composition profile of landfilled GSD ICI MSW.

Table 3-17. Composition Profile of Landfilled Rural ICI MSW

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**36.3%**	**17.80%**
	Newsprint	0.9%	0.96%
	High Grade Office Paper	0.5%	0.59%
	Magazines/Catalogs	1.6%	1.07%
	Uncoated OCC	4.1%	1.63%
	Kraft	0.3%	0.34%
	Boxboard	17.5%	22.97%
	Mixed Paper - Recyclable	1.4%	0.96%
	Compostable Paper and 'other' paper	9.7%	4.55%
	Milk and Juice cartons/boxes, coated	0.2%	0.10%
Plastics		**11.3%**	**5.25%**
	#1 PET Bottles/Jars	1.8%	0.79%
	#1 Other PET Containers & Packaging	0.3%	0.16%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.23%
	#2 HDPE Bottles/ Jars - Color	0.6%	0.34%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	0.6%	0.33%
	#3-#7 Other - All	1.1%	0.59%
	Other Rigid Plastic Products	0.6%	0.40%
	Grocery & Merchandise Bags	1.0%	0.50%
	Trash Bags	1.2%	0.57%
	Commercial & Industrial Film	0.0%	0.00%
	Other Film	3.0%	1.40%
	Remainder/ Composite Plastic	0.8%	0.85%
Glass		**3.7%**	**2.14%**
	Glass Bottles and Jars - clear	2.3%	1.33%
	Glass Bottles and Jars - brown	0.5%	0.39%
	Glass Bottles and Jars - green	1.0%	0.69%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.06%

		Mean	+/-
Misc. Inorganic		**3.9%**	**4.53%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.7%	0.89%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	3.2%	4.48%
Organics		**31.3%**	**15.26%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	5.4%	8.94%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	17.1%	8.74%
	Bottom Fines and Dirt	0.7%	0.68%
	Diapers	6.2%	3.17%
	Other Organic	1.9%	2.50%
Metals		**2.7%**	**1.72%**
	Aluminum Beverage Containers	0.6%	0.36%
	Other Aluminum	0.2%	0.13%
	Ferrous containers (bi-metal cans)	0.7%	0.35%
	Aerosol cans	0.0%	0.04%
	Other Ferrous	0.3%	0.45%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.9%	1.48%
Textiles		**3.2%**	**3.44%**
	Carpet and carpet padding	1.2%	2.03%
	Clothing and other textiles	1.9%	1.49%
HHW		**0.3%**	**0.34%**
	Household Hazardous Waste materials	0.3%	0.34%
C&D		**7.4%**	**7.16%**
	Construction and Demolition materials	7.4%	7.16%
Total Percentage		100.0%	

3.3.5.4 Landfilled GSD Residential/ICI MSW Composition

Figure 3-10 shows the percentage, by weight, of each of the ten material classes for the landfilled GSD residential/ICI MSW sector. Paper, Organics, and Plastics account for approximately 79% (33.6%, 32.3%, and 12.8%, respectively) of the landfilled MSW for this sector.

Figure 3-10. Composition of Landfilled GSD Residential/ICI MSW by Material Class - Fall

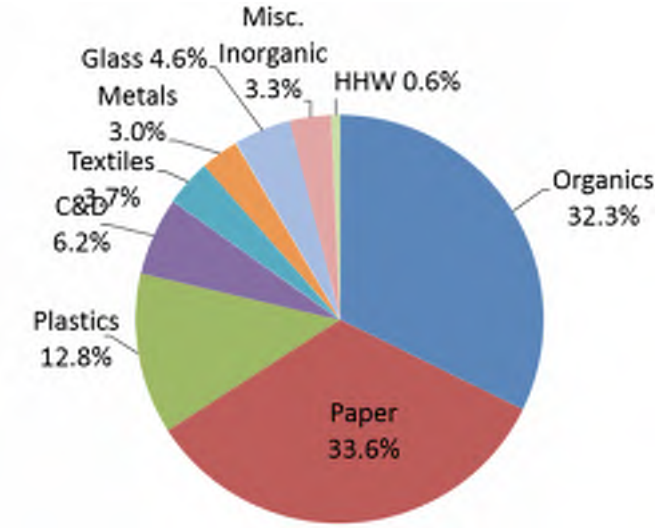


Table 3-18 lists the top ten material categories that were found in the landfilled GSD residential/ICI MSW sector. These ten categories account for approximately 70% of landfilled GSD residential/ICI MSW. Food Scraps, Boxboard, and Compostable Paper and 'other' paper material categories account for 41.4% (18.7%, 12.8%, and 9.9%, respectively) of landfilled GSD residential/ICI MSW.

Table 3-18. Top Ten Individual Material Categories in Landfilled GSD Residential/ICI MSW - Fall

Category	Waste Composition %	Cum. %
Food Scraps	18.7%	18.7%
Boxboard	12.8%	31.5%
Compostable Paper and 'other' paper	9.9%	41.4%
Construction and Demolition materials	6.2%	47.5%
Diapers	5.2%	52.8%
Yard Waste - Compostable; leaves, grass, branches <0.5"	4.8%	57.6%
Uncoated OCC	4.3%	61.8%
Other Film	2.9%	64.7%
Other Organic	2.6%	67.3%
Glass Bottles and Jars - clear	2.5%	69.8%
Total	**69.8%**	

Table 3-19 provides the composition profile of landfilled GSD residential/ICI MSW.

Table 3-19. Composition Profile of Landfilled Rural Residential/ICI MSW

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**33.6%**	**7.93%**
	Newsprint	1.3%	0.44%
	High Grade Office Paper	0.6%	0.27%
	Magazines/Catalogs	2.2%	0.49%
	Uncoated OCC	4.3%	0.75%
	Kraft	0.5%	0.15%
	Boxboard	12.8%	10.22%
	Mixed Paper - Recyclable	1.9%	0.44%
	Compostable Paper and 'other' paper	9.9%	2.04%
	Milk and Juice cartons/boxes, coated	0.2%	0.05%
Plastics		**12.8%**	**2.37%**
	#1 PET Bottles/Jars	2.0%	0.36%
	#1 Other PET Containers & Packaging	0.4%	0.07%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.10%
	#2 HDPE Bottles/ Jars - Color	0.6%	0.15%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	0.7%	0.15%
	#3-#7 Other - All	1.4%	0.27%
	Other Rigid Plastic Products	0.8%	0.19%
	Grocery & Merchandise Bags	1.1%	0.22%
	Trash Bags	1.4%	0.26%
	Commercial & Industrial Film	0.2%	0.09%
	Other Film	2.9%	0.63%
	Remainder/ Composite Plastic	1.0%	0.38%
Glass		**4.6%**	**0.96%**
	Glass Bottles and Jars - clear	2.5%	0.60%
	Glass Bottles and Jars - brown	0.9%	0.19%
	Glass Bottles and Jars - green	1.1%	0.31%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**3.3%**	**2.02%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.05%
	Electronic Equipment	0.8%	0.41%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	2.3%	1.99%
Organics		**32.3%**	**6.81%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	4.8%	3.99%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	18.7%	3.90%
	Bottom Fines and Dirt	1.0%	0.36%
	Diapers	5.2%	1.42%
	Other Organic	2.6%	1.12%
Metals		**3.0%**	**0.78%**
	Aluminum Beverage Containers	0.6%	0.16%
	Other Aluminum	0.3%	0.07%
	Ferrous containers (bi-metal cans)	1.0%	0.16%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	0.3%	0.20%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.7%	0.66%
Textiles		**3.7%**	**1.55%**
	Carpet and carpet padding	1.3%	0.93%
	Clothing and other textiles	2.4%	0.68%
HHW		**0.6%**	**0.21%**
	Household Hazardous Waste materials	0.6%	0.21%
C&D		**6.2%**	**3.20%**
	Construction and Demolition materials	6.2%	3.20%
Total Percentage		100.0%	

Section 4

Recovered Materials Characterization Fall Sampling Event

4.1 Objective

This section develops recovered materials composition estimates for the residential and ICI sectors within Davidson County for the Metro Nashville Waste Stream Characterization Study. All of the results in this section are for materials recovered and delivered to the Waste Management River Hills MRF.

The following sections discuss the methodology used to obtain representative recovered materials composition estimates. This includes the study parameters, the number and allocation of samples, the facility where sampling activities were conducted, and the basis for selecting samples. Sampling activities were completed in accordance with CDM Smith's Work Plan, dated July 2017 (**Appendix A**). The goal of the of the two-season study was to sort and characterize 100 samples of recovered materials. Sampling was planned to be equally split between residential and ICI sectors (50/50).

CDM Smith conducted the fall 2017 sampling event at Waste Management's MRF, over five days between October 9, 2014 and October 13, 2017. A total of 50 recovered materials samples from the residential and ICI waste sector were hand-sorted and characterized.

4.2 Methodology

Section 1.2 presents a summary of the data collection methods and calculation procedures used in this study. Refer to Section 1.2 for details on ASTM standard, material category definitions, and calculation procedures. This section summarized the sample allocation for the fall sampling event.

Davidson County currently has one single-stream MRF that accepts recovered materials from the public, Metro, and private haulers. **Figure 1-1** shows the location of the facility. At the MRF, characterizations of samples were performed. The total number of samples was maximized to the extent possible with the allocated field staff; however, the number varied based on the number of loads available that particular day, site conditions, site staff assistance, weather conditions, the time that loads were delivered to the site, and a number of other factors. Samples collected as part of the recovered materials characterization sampling were generally allocated equally between the residential and ICI sectors, corresponding to the approximate ratio of disposed quantities for each sector. The overall goal of the two-season study for sample distribution between Metro trucks and private trucks is 75% Metro and 25% privates for the recycled materials sorts. During the fall 2017 sampling event, sample distribution was 58% Metro and 42% private because most loads delivered to the MRF were hauled by private companies.

Table 4-1 summarizes the samples that were used to determine the recovered materials composition. A total of 50 samples were collected from the residential and commercial sectors in fall 2017. Of the 50 samples collected, 23 (46%) were samples of commercial waste, and 27 (54%) were samples of residential waste, of those samples a total of 44 (88%) were samples from USD areas and 6 (12%) were samples from GSD areas. **Figure 4-1** illustrates the geographic distribution and waste sectors sampled during the fall 2017 event.

Table 4-1. Number of Recovered Samples by Waste Sector - Fall

Sampling Group	Sample Count		Total Sample Wt.	Mean Sample Wt.
	No.	%	(pounds)	
Residential	27	100%	6,177	228.8
USD	*26*	*96.3%*	*5,990*	*230.4*
GSD	*1*	*3.7%*	*188*	*187.6*
ICI	23	100%	5,661	246.1
USD	*18*	*78.3%*	*4,367*	*242.6*
GSD	*5*	*21.7%*	*1,294*	*258.8*
Total Res/ICI	**50**	**100%**	**11,838**	**236.8**

4.3 Recovered Materials Characterization Results

The recovered materials characterization results from the fall 2017 event are provided in this section. **Table 4-1** summarizes the sample information for each of the study's sampling groups and sectors. The goal for this event was to characterize 100 samples with a sample size of between 200 and 300 lbs (ASTM D5231). CDM Smith conducted the fall 2017 sampling event, over five days between October 9, 2017 and October 20, 2017, where 50 samples were selected and hand sorted at the MRF in Davidson County. The sample sizes and numbers were within the Work Plan goals. The average sample weight for the 50 samples was 237 pounds. A total of 11,838 pounds of recovered materials were sorted and classified during the fall 2017 sampling event.

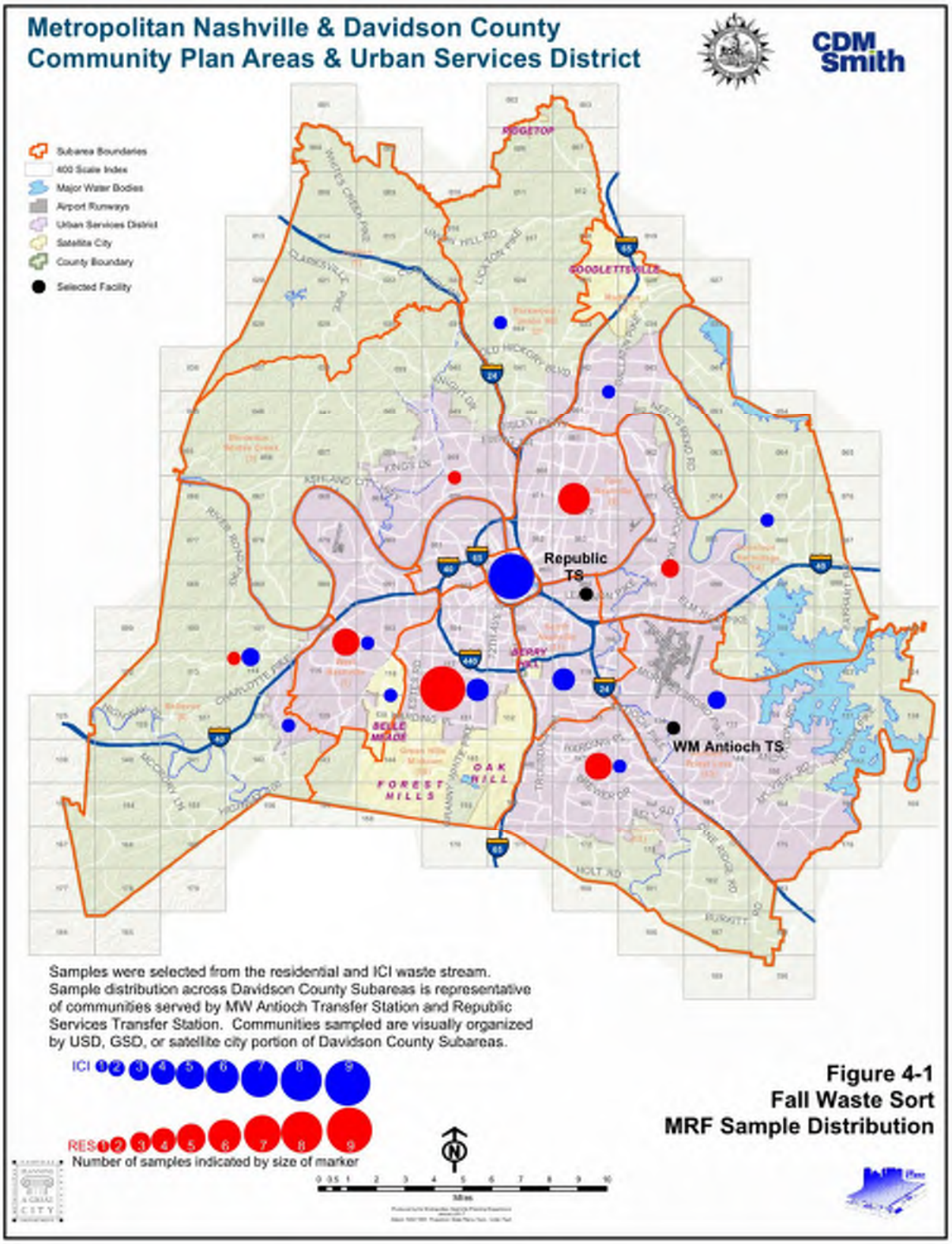
Sampling was planned to be equally split between residential and ICI sectors (50/50) and distribution between Metro trucks and private trucks at an approximate mix of 75% Metro to 25% private haulers for MSW sorts.

In the following sections, the recovered materials composition results are presented for the ICI and residential waste sectors. The combined residential/ICI composition was determined by weighting the ICI and residential sampling results by using the ratio of residential to ICI recovered materials determined by the gatehouse surveys. The equation used for weighting samples is provided in the Work Plan.

Each composition profile is presented as follows:

- A pie chart depicting the nine material classes by weight (i.e., Paper, Plastic, Organics, Textiles, Glass, C&D, Metal, Inorganics, and HHW);

Figure 4-1. Fall 2017 Recovered Materials Sample Distribution



- A list of the ten largest material categories by weight (e.g., Food Scraps, High Grade Office Paper, Televisions, etc.), where waste composition percentages are rounded to the nearest tenth and cumulative totals represent the sum of unrounded results;
- A comprehensive table detailing the full composition results for the entire 50 material categories.

4.3.1 Recovered Residential Materials Composition

Figure 4-2 shows the percentage, by weight, of each of the nine material classes for the recovered residential materials sector. Paper, Plastics, and Glass account for approximately 91% (74.7%, 10.8%, and 5.2%, respectively) of the recovered residential materials for this sector.

Figure 4-2. Composition of Recovered Residential Materials by Material Class - Fall

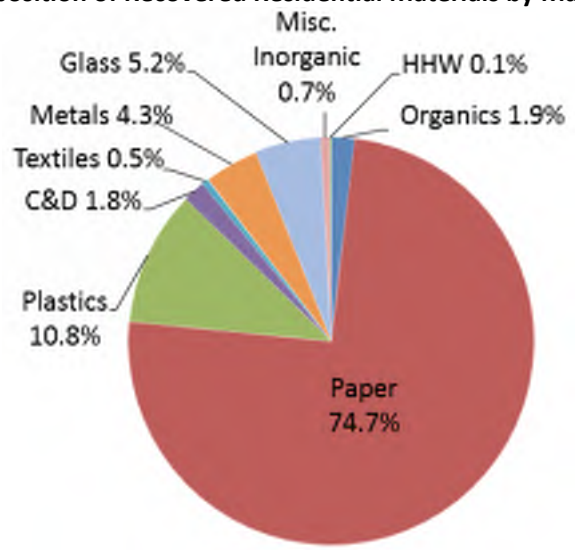


Table 4-2 lists the top ten material categories that were found in the recovered residential materials sector. These ten categories account for approximately 80% of recovered residential materials. Uncoated OCC, Magazines/Catalogs, and Newsprint material categories account for 48.6% (25.8%, 13.7%, and 9.1%, respectively) of recovered residential materials.

Table 4-2. Top Ten Individual Material Categories in Recovered Residential Materials - Fall

Category	Waste Composition %	Cum. %
Uncoated OCC	25.8%	25.8%
Magazines/Catalogs	13.7%	39.5%
Newsprint	9.1%	48.6%
Boxboard	8.5%	57.1%
High Grade Office Paper	6.5%	63.5%
Mixed Paper - Recyclable	5.4%	69.0%
Compostable Paper and 'other' paper	3.4%	72.4%
#1 PET Bottles/Jars	3.1%	75.5%
Glass Bottles and Jars - brown	2.2%	77.7%
Glass Bottles and Jars - clear	2.0%	79.7%
Total	**79.7%**	

Table 4-3 provides a composition profile of recovered residential materials.

Table 4-3. Composition Profile of Recovered Residential Materials

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**74.7%**	**7.63%**
	Newsprint	9.1%	2.42%
	High Grade Office Paper	6.5%	5.86%
	Magazines/Catalogs	13.7%	3.27%
	Uncoated OCC	25.8%	3.92%
	Kraft	1.8%	0.41%
	Boxboard	8.5%	1.22%
	Mixed Paper - Recyclable	5.4%	1.04%
	Compostable Paper and 'other' paper	3.4%	0.70%
	Milk and Juice cartons/boxes, coated	0.5%	0.12%
Plastics		**10.8%**	**1.36%**
	#1 PET Bottles/Jars	3.1%	0.44%
	#1 Other PET Containers & Packaging	0.7%	0.14%
	#2 HDPE Bottles/Jars - Clear	0.8%	0.17%
	#2 HDPE Bottles/ Jars - Color	1.0%	0.27%
	#2 Other HDPE Containers & Packaging	0.0%	0.01%
	#6 Expanded Polystyrene Packaging (EPS)	0.4%	0.18%
	#3-#7 Other - All	1.3%	0.27%
	Other Rigid Plastic Products	0.8%	0.21%
	Grocery & Merchandise Bags	0.3%	0.08%
	Trash Bags	0.4%	0.16%
	Commercial & Industrial Film	0.0%	0.00%
	Other Film	1.4%	0.37%
	Remainder/ Composite Plastic	0.5%	0.15%
Glass		**5.2%**	**2.61%**
	Glass Bottles and Jars - clear	2.0%	0.71%
	Glass Bottles and Jars - brown	2.2%	1.72%
	Glass Bottles and Jars - green	0.8%	0.43%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.2%	0.28%
	Other Glass	0.1%	0.05%

		Mean	+/-
Misc. Inorganic		**0.7%**	**0.43%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.1%	0.09%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.6%	0.43%
Organics		**1.9%**	**0.80%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.01%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	1.1%	0.72%
	Bottom Fines and Dirt	0.3%	0.16%
	Diapers	0.1%	0.06%
	Other Organic	0.2%	0.14%
Metals		**4.3%**	**0.95%**
	Aluminum Beverage Containers	1.6%	0.35%
	Other Aluminum	0.1%	0.10%
	Ferrous containers (bi-metal cans)	1.5%	0.35%
	Aerosol cans	0.1%	0.04%
	Other Ferrous	0.6%	0.56%
	Other Non-Ferrous	0.1%	0.07%
	Other Metal	0.3%	0.20%
Textiles		**0.5%**	**0.23%**
	Carpet and carpet padding	0.0%	0.02%
	Clothing and other textiles	0.5%	0.24%
HHW		**0.1%**	**0.10%**
	Household Hazardous Waste materials	0.1%	0.10%
C&D		**1.8%**	**1.82%**
	Construction and Demolition materials	1.8%	1.82%
Total Percentage		100.0%	

4.3.2 Recovered ICI Materials Composition

Figure 4-3 shows the percentage, by weight, of each of the nine material classes for the recovered ICI materials sector. Paper, Plastics, and C&D account for approximately 96% (88.1%, 5.4%, and 2.2%, respectively) of the recovered ICI materials for this sector.

Figure 4-3. Composition of Recovered ICI Materials by Material Class - Fall

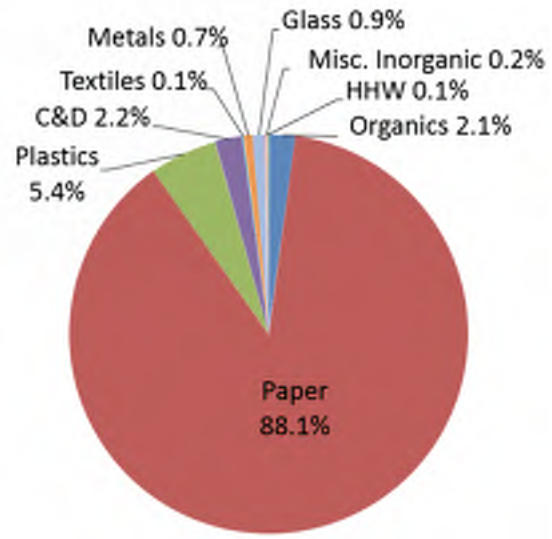


Table 4-4 lists the top ten material categories that were found in the recovered ICI materials sector. These ten categories account for approximately 93% of recovered ICI materials. Uncoated OCC, Boxboard, and High Grade Office Paper material categories account for 83.5% (72.6%, 6.8%, and 4%, respectively) of recovered ICI materials.

Table 4-4. Top Ten Individual Material Categories in Recovered ICI Materials - Fall

Category	Waste Composition %	Cum. %
Uncoated OCC	72.6%	72.6%
Boxboard	6.8%	79.5%
High Grade Office Paper	4.0%	83.5%
Construction and Demolition materials	2.2%	85.7%
Other Film	1.8%	87.5%
Compostable Paper and 'other' paper	1.7%	89.1%
Food Scraps	1.6%	90.8%
Magazines/Catalogs	1.0%	91.7%
Other Rigid Plastic Products	0.8%	92.6%
#1 PET Bottles/Jars	0.8%	93.3%
Total	**93.3%**	

Table 4-5 provides the composition profile of the recovered ICI materials sector.

Table 4-5. Composition Profile of Recovered ICI Materials

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**88.1%**	**5.20%**
	Newsprint	0.6%	0.39%
	High Grade Office Paper	4.0%	3.75%
	Magazines/Catalogs	1.0%	0.42%
	Uncoated OCC	72.6%	6.58%
	Kraft	0.6%	0.35%
	Boxboard	6.8%	4.17%
	Mixed Paper - Recyclable	0.6%	0.33%
	Compostable Paper and 'other' paper	1.7%	0.64%
	Milk and Juice cartons/boxes, coated	0.1%	0.08%
Plastics		**5.4%**	**2.64%**
	#1 PET Bottles/Jars	0.8%	0.39%
	#1 Other PET Containers & Packaging	0.1%	0.05%
	#2 HDPE Bottles/Jars - Clear	0.2%	0.08%
	#2 HDPE Bottles/ Jars - Color	0.1%	0.07%
	#2 Other HDPE Containers & Packaging	0.0%	0.01%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.21%
	#3-#7 Other - All	0.4%	0.34%
	Other Rigid Plastic Products	0.8%	0.55%
	Grocery & Merchandise Bags	0.1%	0.02%
	Trash Bags	0.4%	0.29%
	Commercial & Industrial Film	0.3%	0.28%
	Other Film	1.8%	1.98%
	Remainder/ Composite Plastic	0.2%	0.14%
Glass		**0.9%**	**0.73%**
	Glass Bottles and Jars - clear	0.4%	0.29%
	Glass Bottles and Jars - brown	0.3%	0.28%
	Glass Bottles and Jars - green	0.2%	0.21%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.04%

		Mean	+/-
Misc. Inorganic		**0.2%**	**0.26%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.0%	0.03%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.2%	0.26%
Organics		**2.1%**	**2.14%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1%	0.10%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	1.6%	1.54%
	Bottom Fines and Dirt	0.0%	0.04%
	Diapers	0.3%	0.54%
	Other Organic	0.0%	0.02%
Metals		**0.7%**	**0.29%**
	Aluminum Beverage Containers	0.4%	0.25%
	Other Aluminum	0.0%	0.04%
	Ferrous containers (bi-metal cans)	0.2%	0.10%
	Aerosol cans	0.0%	0.02%
	Other Ferrous	0.1%	0.04%
	Other Non-Ferrous	0.0%	0.01%
	Other Metal	0.0%	0.03%
Textiles		**0.1%**	**0.14%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.1%	0.14%
HHW		**0.1%**	**0.10%**
	Household Hazardous Waste materials	0.1%	0.10%
C&D		**2.2%**	**2.57%**
	Construction and Demolition materials	2.2%	2.57%
Total Percentage		100.0%	

4.3.3 Recovered Residential/ICI Materials Composition

Figure 4-4 shows the percentage, by weight, of each of the nine material classes for the combined recovered residential and ICI materials sectors. Paper, Plastics, and Glass account for approximately 92% (78.3%, 9.3%, and 4.1%, respectively) of the recovered combined residential/ICI materials.

Figure 4-4. Composition of Recovered Residential/ICI Materials by Material Class - Fall

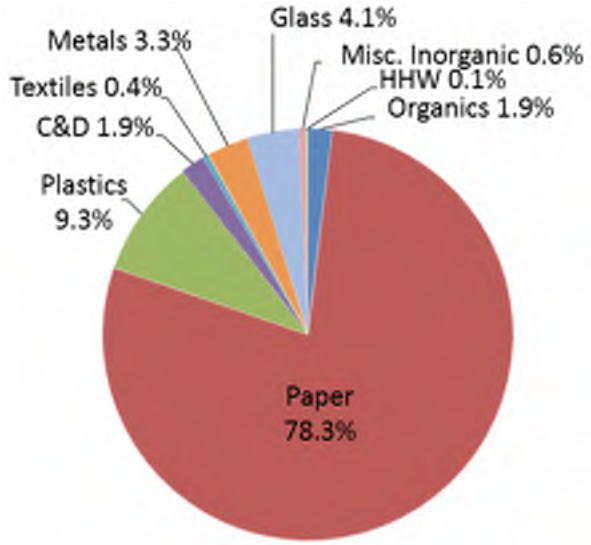


Table 4-6 lists the top ten material categories that were found in the recovered combined residential/ICI materials. These ten categories account for approximately 82% of recovered combined residential/ICI materials. Uncoated OCC, Magazines/Catalogs, and Boxboard material categories account for 56.8% (38.6%, 10.2%, and 8%, respectively) of recovered combined residential/ICI materials.

Table 4-6. Top Ten Individual Material Categories in Recovered Residential/ICI Materials - Fall

Category	Waste Composition %	Cum. %
Uncoated OCC	38.6%	38.6%
Magazines/Catalogs	10.2%	48.8%
Boxboard	8.0%	56.8%
Newsprint	6.8%	63.6%
High Grade Office Paper	5.8%	69.4%
Mixed Paper - Recyclable	4.1%	73.5%
Compostable Paper and 'other' paper	2.9%	76.5%
#1 PET Bottles/Jars	2.5%	78.9%
Construction and Demolition materials	1.9%	80.8%
Glass Bottles and Jars - brown	1.7%	82.5%
Total	**82.5%**	

Table 4-7 provides the composition profile of the recovered combined residential/ICI materials.

Table 4-7. Composition Profile of Recovered Residential/ICI Materials

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**78.3%**	**4.05%**
	Newsprint	6.8%	1.28%
	High Grade Office Paper	5.8%	3.11%
	Magazines/Catalogs	10.2%	1.73%
	Uncoated OCC	38.6%	2.13%
	Kraft	1.5%	0.22%
	Boxboard	8.0%	0.72%
	Mixed Paper - Recyclable	4.1%	0.55%
	Compostable Paper and 'other' paper	2.9%	0.37%
	Milk and Juice cartons/boxes, coated	0.4%	0.06%
Plastics		**9.3%**	**0.75%**
	#1 PET Bottles/Jars	2.5%	0.24%
	#1 Other PET Containers & Packaging	0.5%	0.07%
	#2 HDPE Bottles/Jars - Clear	0.6%	0.09%
	#2 HDPE Bottles/ Jars - Color	0.8%	0.14%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	0.4%	0.10%
	#3-#7 Other - All	1.1%	0.14%
	Other Rigid Plastic Products	0.8%	0.12%
	Grocery & Merchandise Bags	0.2%	0.04%
	Trash Bags	0.4%	0.08%
	Commercial & Industrial Film	0.1%	0.02%
	Other Film	1.5%	0.24%
	Remainder/ Composite Plastic	0.4%	0.08%
Glass		**4.1%**	**1.38%**
	Glass Bottles and Jars - clear	1.5%	0.38%
	Glass Bottles and Jars - brown	1.7%	0.91%
	Glass Bottles and Jars - green	0.6%	0.23%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.1%	0.15%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**0.6%**	**0.23%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.1%	0.05%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.5%	0.23%
Organics		**1.9%**	**0.45%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.01%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	1.3%	0.40%
	Bottom Fines and Dirt	0.3%	0.09%
	Diapers	0.2%	0.05%
	Other Organic	0.2%	0.07%
Metals		**3.3%**	**0.50%**
	Aluminum Beverage Containers	1.3%	0.18%
	Other Aluminum	0.1%	0.05%
	Ferrous containers (bi-metal cans)	1.1%	0.18%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	0.4%	0.29%
	Other Non-Ferrous	0.1%	0.04%
	Other Metal	0.2%	0.11%
Textiles		**0.4%**	**0.12%**
	Carpet and carpet padding	0.0%	0.01%
	Clothing and other textiles	0.4%	0.13%
HHW		**0.1%**	**0.05%**
	Household Hazardous Waste materials	0.1%	0.05%
C&D		**1.9%**	**0.98%**
	Construction and Demolition materials	1.9%	0.98%
Total Percentage		100.0%	

4.3.4 Recovered USD MSW Composition

In determining the recovered USD MSW composition for residential and ICI MSW sectors, the samples were identified based on collection route within the USD. Out of 50 samples, a total of 44 (88%) of the samples were collected from the USD MSW sector. 26 (59.1%) USD samples were collected from residential MSW and 18 (40.9%) USD samples were collected from ICI MSW.

4.3.4.1 Recovered USD Residential MSW

Figure 4-5 shows the percentage, by weight, of each of the ten material classes for the recovered USD residential MSW subsector. Paper, Plastics, and Glass account for approximately 91% (74.8%, 10.6%, and 5.2%, respectively) of the recovered MSW for this sector.

Figure 4-5. Composition of Recovered USD Residential MSW by Material Class - Fall

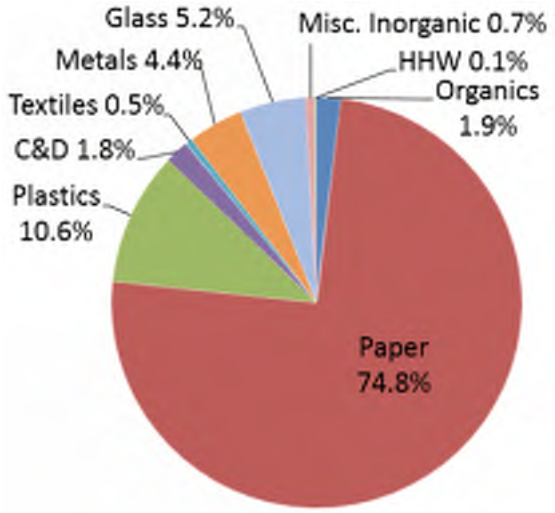


Table 4-8 lists the top ten material categories that were found in the recovered USD residential MSW subsector. These ten categories account for approximately 80% of recovered USD residential MSW. Uncoated OCC, Magazines/Catalogs, and Newsprint material categories account for 64.4% (33%, 22.6%, and 8.9%, respectively) of recovered USD residential MSW.

Table 4-8. Top Ten Individual Material Categories in Recovered USD Residential MSW - Fall

Category	Waste Composition %	Cum. %
Uncoated OCC	26.2%	26.2%
Magazines/Catalogs	13.4%	39.7%
Newsprint	9.1%	48.7%
Boxboard	8.5%	57.2%
High Grade Office Paper	6.5%	63.7%
Mixed Paper - Recyclable	5.3%	69.0%
Compostable Paper and 'other' paper	3.5%	72.5%
#1 PET Bottles/Jars	3.1%	75.5%
Glass Bottles and Jars - brown	2.3%	77.8%
Glass Bottles and Jars - clear	1.9%	79.7%
Total	**79.7%**	

Table 4-9 provides the composition profile of recovered USD residential MSW.

Table 4-9. Composition Profile of Recovered Urban Residential Materials

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**74.8%**	**7.81%**
	Newsprint	9.1%	2.50%
	High Grade Office Paper	6.5%	6.05%
	Magazines/Catalogs	13.4%	3.37%
	Uncoated OCC	26.2%	3.91%
	Kraft	1.8%	0.41%
	Boxboard	8.5%	1.26%
	Mixed Paper - Recyclable	5.3%	1.05%
	Compostable Paper and 'other' paper	3.5%	0.70%
	Milk and Juice cartons/boxes, coated	0.5%	0.11%
Plastics		**10.6%**	**1.38%**
	#1 PET Bottles/Jars	3.1%	0.46%
	#1 Other PET Containers & Packaging	0.7%	0.14%
	#2 HDPE Bottles/Jars - Clear	0.8%	0.17%
	#2 HDPE Bottles/ Jars - Color	1.0%	0.27%
	#2 Other HDPE Containers & Packaging	0.0%	0.01%
	#6 Expanded Polystyrene Packaging (EPS)	0.4%	0.19%
	#3-#7 Other - All	1.3%	0.27%
	Other Rigid Plastic Products	0.8%	0.22%
	Grocery & Merchandise Bags	0.3%	0.08%
	Trash Bags	0.4%	0.16%
	Commercial & Industrial Film	0.0%	0.00%
	Other Film	1.3%	0.38%
	Remainder/ Composite Plastic	0.5%	0.16%
Glass		**5.2%**	**2.69%**
	Glass Bottles and Jars - clear	1.9%	0.73%
	Glass Bottles and Jars - brown	2.3%	1.78%
	Glass Bottles and Jars - green	0.8%	0.45%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.2%	0.29%
	Other Glass	0.1%	0.05%

		Mean	+/-
Misc. Inorganic		**0.7%**	**0.44%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.1%	0.09%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.6%	0.45%
Organics		**1.9%**	**0.82%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.01%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	1.2%	0.74%
	Bottom Fines and Dirt	0.3%	0.17%
	Diapers	0.1%	0.06%
	Other Organic	0.2%	0.14%
Metals		**4.4%**	**0.98%**
	Aluminum Beverage Containers	1.7%	0.35%
	Other Aluminum	0.1%	0.10%
	Ferrous containers (bi-metal cans)	1.5%	0.35%
	Aerosol cans	0.1%	0.04%
	Other Ferrous	0.5%	0.57%
	Other Non-Ferrous	0.1%	0.07%
	Other Metal	0.3%	0.21%
Textiles		**0.5%**	**0.24%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.5%	0.24%
HHW		**0.1%**	**0.10%**
	Household Hazardous Waste materials	0.1%	0.10%
C&D		**1.8%**	**1.87%**
	Construction and Demolition materials	1.8%	1.87%
Total Percentage		100.0%	

4.3.4.2 Recovered USD ICI MSW

Figure 4-6 shows the percentage, by weight, of each of the ten material classes for the recovered USD ICI MSW subsector. Paper, Plastics, and Glass account for approximately 97% (90.2%, 5.6%, and 1.2%, respectively) of the recovered MSW for this subsector.

Figure 4-6. Composition of Recovered USD ICI MSW by Material Class - Fall

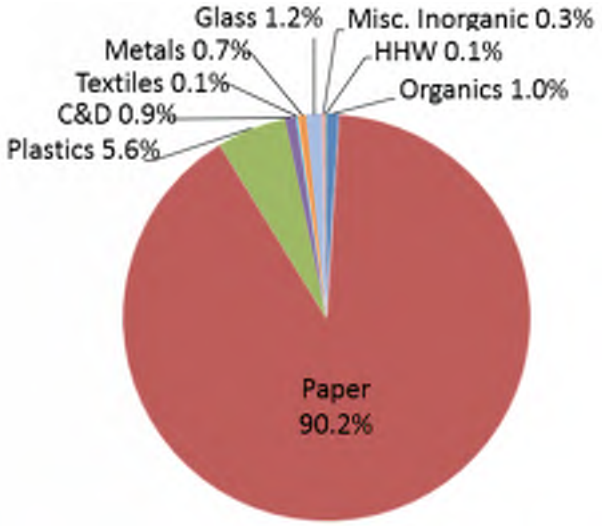


Table 4-10 lists the top ten material categories that were found in the recovered USD ICI MSW subsector. These ten categories account for approximately 94% of the recovered USD ICI MSW. Uncoated OCC, Boxboard, and High Grade Office Paper material categories account for 85.7% (72.4%, 8.2%, and 5.1%, respectively) of recovered USD ICI MSW.

Table 4-10. Top Ten Individual Material Categories in Recovered USD ICI MSW - Fall

Category	Waste Composition %	Cum. %
Uncoated OCC	72.4%	72.4%
Boxboard	8.2%	80.6%
High Grade Office Paper	5.1%	85.7%
Other Film	2.1%	87.7%
Compostable Paper and 'other' paper	1.5%	89.2%
Magazines/Catalogs	1.0%	90.3%
Other Rigid Plastic Products	0.9%	91.2%
Food Scraps	0.9%	92.1%
#1 PET Bottles/Jars	0.9%	93.0%
Construction and Demolition materials	0.9%	93.8%
Total	**93.8%**	

Table 4-11 provides the composition profile of the recovered USD ICI MSW sector.

Table 4-11. Composition Profile of Recovered Urban ICI Materials

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**90.2%**	**6.53%**
	Newsprint	0.7%	0.50%
	High Grade Office Paper	5.1%	4.81%
	Magazines/Catalogs	1.0%	0.51%
	Uncoated OCC	72.4%	8.39%
	Kraft	0.5%	0.37%
	Boxboard	8.2%	5.34%
	Mixed Paper - Recyclable	0.7%	0.40%
	Compostable Paper and 'other' paper	1.5%	0.68%
	Milk and Juice cartons/boxes, coated	0.1%	0.07%
Plastics		**5.6%**	**3.21%**
	#1 PET Bottles/Jars	0.9%	0.49%
	#1 Other PET Containers & Packaging	0.1%	0.07%
	#2 HDPE Bottles/Jars - Clear	0.2%	0.10%
	#2 HDPE Bottles/ Jars - Color	0.1%	0.05%
	#2 Other HDPE Containers & Packaging	0.0%	0.02%
	#6 Expanded Polystyrene Packaging (EPS)	0.1%	0.07%
	#3-#7 Other - All	0.3%	0.15%
	Other Rigid Plastic Products	0.9%	0.70%
	Grocery & Merchandise Bags	0.1%	0.02%
	Trash Bags	0.3%	0.15%
	Commercial & Industrial Film	0.4%	0.36%
	Other Film	2.1%	2.57%
	Remainder/ Composite Plastic	0.2%	0.18%
Glass		**1.2%**	**0.93%**
	Glass Bottles and Jars - clear	0.5%	0.37%
	Glass Bottles and Jars - brown	0.3%	0.36%
	Glass Bottles and Jars - green	0.3%	0.26%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.05%

		Mean	+/-
Misc. Inorganic		**0.3%**	**0.34%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.0%	0.04%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.2%	0.34%
Organics		**1.0%**	**0.75%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.01%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	0.9%	0.71%
	Bottom Fines and Dirt	0.0%	0.05%
	Diapers	0.0%	0.00%
	Other Organic	0.0%	0.02%
Metals		**0.7%**	**0.33%**
	Aluminum Beverage Containers	0.5%	0.31%
	Other Aluminum	0.0%	0.01%
	Ferrous containers (bi-metal cans)	0.1%	0.05%
	Aerosol cans	0.0%	0.03%
	Other Ferrous	0.0%	0.03%
	Other Non-Ferrous	0.0%	0.02%
	Other Metal	0.0%	0.03%
Textiles		**0.1%**	**0.18%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.1%	0.18%
HHW		**0.1%**	**0.06%**
	Household Hazardous Waste materials	0.1%	0.06%
C&D		**0.9%**	**0.68%**
	Construction and Demolition materials	0.9%	0.68%
Total Percentage		100.0%	

4.3.4.3 Recovered USD Residential/ICI MSW Composition

Figure 4-7 shows the percentage, by weight, of each of the ten material classes for the recovered USD residential/ICI MSW sector. Paper, Plastics, and Glass account for over 92% (79.0%, 9.2%, and 4.1%, respectively) of the recovered MSW for this sector.

Figure 4-7. Composition of Recovered USD Residential/ICI MSW by Material Class - Fall

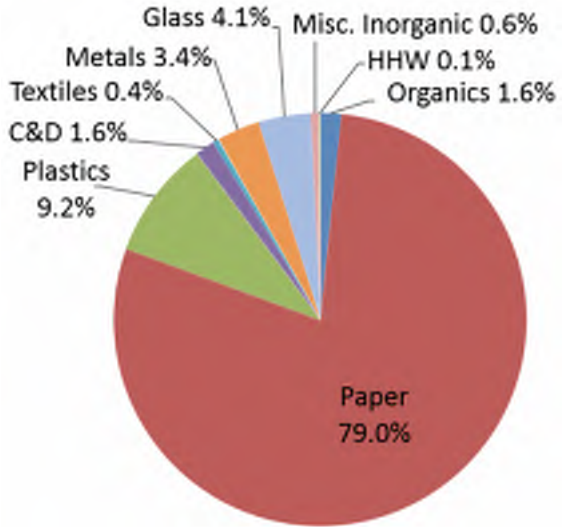


Table 4-12 lists the top ten material categories that were found in the recovered USD residential/ICI MSW sector. These ten categories account for approximately 83% of recovered USD MSW. Uncoated OCC, Magazines/Catalogs, and Boxboard material categories account for 57.2% (38.8%, 10%, and 8.4%, respectively) of recovered USD residential/ICI MSW.

Table 4-12. Top Ten Individual Material Categories in Recovered USD Residential/ICI MSW - Fall

Category	Waste Composition %	Cum. %
Uncoated OCC	38.8%	38.8%
Magazines/Catalogs	10.0%	48.9%
Boxboard	8.4%	57.2%
Newsprint	6.8%	64.0%
High Grade Office Paper	6.1%	70.1%
Mixed Paper - Recyclable	4.0%	74.2%
Compostable Paper and 'other' paper	3.0%	77.1%
#1 PET Bottles/Jars	2.5%	79.6%
Glass Bottles and Jars - brown	1.7%	81.3%
Construction and Demolition materials	1.6%	82.9%
Total	**82.9%**	

Table 4-13 provides the composition profile of recovered USD residential/ICI MSW.

Table 4-13. Composition Profile of Recovered Urban Residential/ICI Materials

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**79.0%**	**4.16%**
	Newsprint	6.8%	1.32%
	High Grade Office Paper	6.1%	3.22%
	Magazines/Catalogs	10.0%	1.78%
	Uncoated OCC	38.8%	2.16%
	Kraft	1.5%	0.22%
	Boxboard	8.4%	0.78%
	Mixed Paper - Recyclable	4.0%	0.56%
	Compostable Paper and 'other' paper	3.0%	0.37%
	Milk and Juice cartons/boxes, coated	0.4%	0.06%
Plastics		**9.2%**	**0.77%**
	#1 PET Bottles/Jars	2.5%	0.24%
	#1 Other PET Containers & Packaging	0.5%	0.07%
	#2 HDPE Bottles/Jars - Clear	0.6%	0.09%
	#2 HDPE Bottles/ Jars - Color	0.7%	0.14%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.10%
	#3-#7 Other - All	1.0%	0.14%
	Other Rigid Plastic Products	0.8%	0.13%
	Grocery & Merchandise Bags	0.2%	0.04%
	Trash Bags	0.4%	0.09%
	Commercial & Industrial Film	0.1%	0.03%
	Other Film	1.5%	0.28%
	Remainder/ Composite Plastic	0.4%	0.09%
Glass		**4.1%**	**1.43%**
	Glass Bottles and Jars - clear	1.5%	0.39%
	Glass Bottles and Jars - brown	1.7%	0.94%
	Glass Bottles and Jars - green	0.7%	0.24%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.1%	0.15%
	Other Glass	0.1%	0.03%

		Mean	+/-
Misc. Inorganic		**0.6%**	**0.23%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.1%	0.05%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.5%	0.24%
Organics		**1.6%**	**0.44%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.01%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	1.1%	0.40%
	Bottom Fines and Dirt	0.3%	0.09%
	Diapers	0.1%	0.03%
	Other Organic	0.2%	0.07%
Metals		**3.4%**	**0.52%**
	Aluminum Beverage Containers	1.4%	0.19%
	Other Aluminum	0.1%	0.05%
	Ferrous containers (bi-metal cans)	1.1%	0.18%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	0.4%	0.30%
	Other Non-Ferrous	0.1%	0.04%
	Other Metal	0.2%	0.11%
Textiles		**0.4%**	**0.13%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.4%	0.13%
HHW		**0.1%**	**0.05%**
	Household Hazardous Waste materials	0.1%	0.05%
C&D		**1.6%**	**0.99%**
	Construction and Demolition materials	1.6%	0.99%
Total Percentage		100.0%	

4.3.5 Recovered GSD MSW Composition

In determining the recovered GSD MSW composition for the residential and ICI sectors, the samples were split based on collection route within the GSD (including satellite cities). Out of 50 samples collected, a total of 6 (12%) samples were collected from the GSD MSW sector, 1 (16.7%) GSD samples were collected from the GSD residential MSW subsector and 5 (83.3%) GSD samples were collected from the GSD ICI MSW subsector.

4.3.5.1 Recovered GSD Residential MSW

Only one GSD residential sample was processed. As such, the data does not warrant separate summary.

4.3.5.2 Recovered GSD ICI MSW

Figure 4-8 shows the percentage, by weight, of each of the ten material classes for the recovered GSD ICI MSW subsector. Paper, C&D, and Organics account for approximately 94% (80.9%, 6.9%, and 6.0%, respectively) of the recovered MSW for this subsector.

Figure 4-8. Composition of Recovered GSD ICI MSW by Material Class - Fall

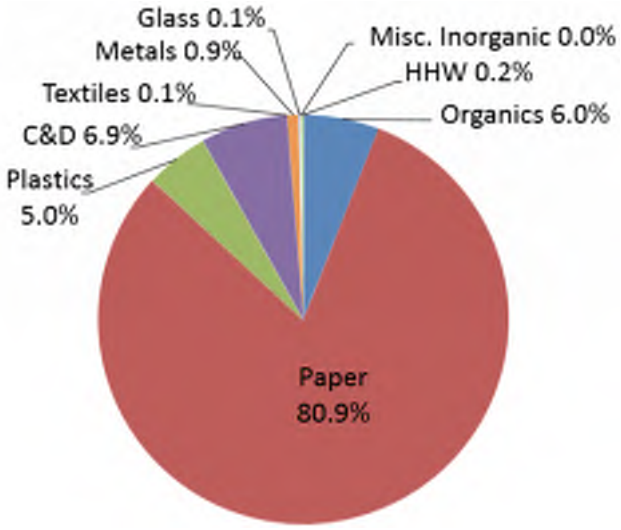


Table 4-14 lists the top ten material categories that were found in the recovered GSD ICI MSW subsector. These ten categories account for approximately 94% of recovered GSD ICI MSW. Uncoated OCC, Construction and Demolition materials, and Food Scraps material categories account for 84.3% (73.3%, 6.9%, and 4.1%, respectively) of recovered GSD ICI MSW.

Table 4-14. Top Ten Individual Material Categories in Recovered GSD ICI MSW - Fall

Category	Waste Composition %	Cum. %
Uncoated OCC	73.3%	73.3%
Construction and Demolition materials	6.9%	80.2%
Food Scraps	4.1%	84.3%
Boxboard	2.4%	86.7%
Compostable Paper and 'other' paper	2.2%	88.9%
Diapers	1.4%	90.4%
#3-#7 Other - All	1.0%	91.3%
Kraft	0.9%	92.3%
#6 Expanded Polystyrene Packaging (EPS)	0.9%	93.1%
Other Film	0.8%	93.9%
Total	**93.9%**	

Table 4-15 provides the composition profile of recovered GSD ICI MSW.

Table 4-15. Composition Profile of Recovered Rural ICI Materials

Fall Sort

Calculated at a 90% confidence level

		Mean	+/-
Paper		**80.9%**	**6.08%**
	Newsprint	0.3%	0.36%
	High Grade Office Paper	0.3%	0.29%
	Magazines/Catalogs	0.7%	0.71%
	Uncoated OCC	73.3%	5.26%
	Kraft	0.9%	0.95%
	Boxboard	2.4%	0.40%
	Mixed Paper - Recyclable	0.4%	0.57%
	Compostable Paper and 'other' paper	2.2%	1.63%
	Milk and Juice cartons/boxes, coated	0.2%	0.27%
Plastics		**5.0%**	**4.65%**
	#1 PET Bottles/Jars	0.4%	0.37%
	#1 Other PET Containers & Packaging	0.0%	0.03%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.18%
	#2 HDPE Bottles/ Jars - Color	0.2%	0.25%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	0.9%	0.83%
	#3-#7 Other - All	1.0%	1.46%
	Other Rigid Plastic Products	0.5%	0.51%
	Grocery & Merchandise Bags	0.1%	0.07%
	Trash Bags	0.7%	1.20%
	Commercial & Industrial Film	0.0%	0.02%
	Other Film	0.8%	0.84%
	Remainder/ Composite Plastic	0.1%	0.06%
Glass		**0.1%**	**0.11%**
	Glass Bottles and Jars - clear	0.1%	0.12%
	Glass Bottles and Jars - brown	0.0%	0.01%
	Glass Bottles and Jars - green	0.0%	0.00%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**0.0%**	**0.03%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.0%	0.03%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.0%	0.00%
Organics		**6.0%**	**9.17%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.4%	0.39%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	4.1%	6.49%
	Bottom Fines and Dirt	0.0%	0.05%
	Diapers	1.4%	2.38%
	Other Organic	0.0%	0.03%
Metals		**0.9%**	**0.63%**
	Aluminum Beverage Containers	0.2%	0.12%
	Other Aluminum	0.1%	0.18%
	Ferrous containers (bi-metal cans)	0.4%	0.34%
	Aerosol cans	0.0%	0.00%
	Other Ferrous	0.1%	0.15%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.0%	0.08%
Textiles		**0.1%**	**0.09%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.1%	0.09%
HHW		**0.2%**	**0.38%**
	Household Hazardous Waste materials	0.2%	0.38%
C&D		**6.9%**	**11.22%**
	Construction and Demolition materials	6.9%	11.22%
Total Percentage		100.0%	

4.3.5.3 Recovered GSD Residential/ICI MSW Composition

Only one GSD residential sample was processed. As such, the combination of GSD residential and ICI data sets do not warrant separate summary.

Section 5

MSW Characterization Summer and Fall Sampling Combined

5.1 Objective

The previous sections summarized the summer sampling event results and fall sampling event results. The following sections develop the MSW composition estimates by waste sectors, geographic areas, estimate county level composition profiles, and estimate diversion for the Metro Nashville and Davidson County Waste Stream Characterization Study. All of the results in this section were generated from waste samples taken at Republic Transfer Station and Waste Management Antioch Transfer Station.

5.2 Summary of Study

A total of 192 waste samples were hand-sorted and characterized. The overall goal of the two-season study for sample distribution between Metro trucks and private trucks is 25% Metro and 75% privates for the MSW sorts and the sampling split would be approximately 50/50 between residential and ICI sectors. **Table 5-1** summarizes the summer and fall samples combined that were used to determine the landfilled MSW composition. A total of 192 waste samples were processed from the residential and commercial waste sectors. Of the 192 samples processed, 96 (50%) were samples of commercial waste (ICI), and 96 (50%) were samples of residential waste; 78% were samples from USD areas and 22% were samples from GSD areas; and 26% of the samples were from Metro routes and 74% were from private routes.

Table 5-1. Number of Landfilled Samples by Waste Sector

Sampling Group	Sample Count		Total Sample Wt.
	No.	%	(pounds)
Residential	96	50%	20,586
USD	*67*	*69.8%*	*13,899*
GSD	*29*	*30.2%*	*6,687*
ICI	96	50%	21,551
USD	*83*	*86.5%*	*18,662*
GSD	*13*	*13.5%*	*2,888*
Total Res/ICI	**192**	**100%**	**42,136**

5.3 MSW Characterization Results

In the following sections, the landfilled MSW composition results are presented for the ICI and residential waste sectors. The combined residential/ICI composition was determined by

weighting the ICI and residential sampling results by using the ratio of 33% residential to 67% ICI MSW determined by the gatehouse surveys.

Each composition profile is presented as follows:

- A pie chart depicting the nine material classes by weight (i.e., Paper, Plastic, Organics, Textiles, Glass, C&D, Metal, Inorganics, and HHW);
- A list of the ten largest material categories by weight (e.g., Food Scraps, High Grade Office Paper, Televisions, etc.), where waste composition percentages are rounded to the nearest tenth and cumulative totals represent the sum of unrounded results;
- A comprehensive table detailing the full composition results for the entire 50 material categories.

5.3.1 Landfilled Residential MSW Composition

Figure 5-1 shows the percentage, by weight, of each of the nine material classes for the landfilled residential MSW sector. Organics, Paper, and Plastics account for approximately 71% (31.9%, 23.2%, and 15.5%, respectively) of the landfilled residential MSW for this sector.

Figure 5-1. Composition of Landfilled Residential MSW by Material Class

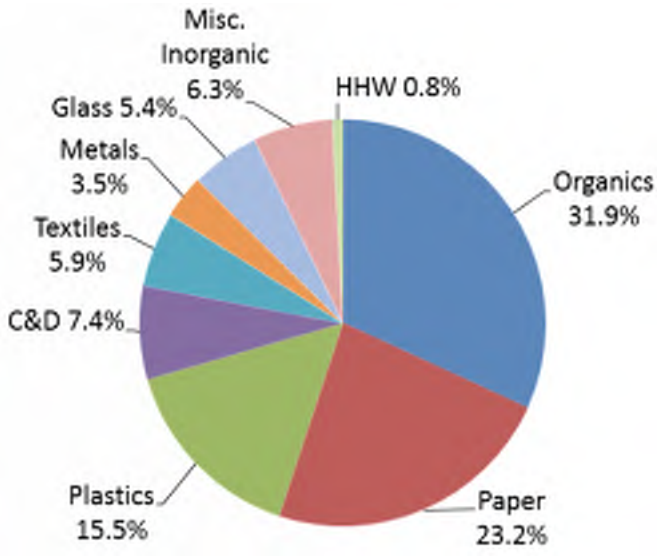


Table 5-2 lists the top ten material categories that were found in the landfilled residential MSW sector. These ten categories account for approximately 64% of landfilled residential MSW. Food Scraps, Compostable Paper and 'other' paper, and Construction and Demolition materials material categories account for 37.4% (20.8%, 9.3%, and 7.4%, respectively) of landfilled residential MSW.

Table 5-2. Top Ten Individual Material Categories in Landfilled Residential MSW

Category	Waste Composition %	Cum. %
Food Scraps	20.8%	20.8%
Compostable Paper and 'other' paper	9.3%	30.0%
Construction and Demolition materials	7.4%	37.4%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.1%	42.5%
Clothing and other textiles	5.1%	47.6%
Diapers	3.7%	51.4%
Uncoated OCC	3.5%	54.9%
Other Organic	3.2%	58.1%
Yard Waste - Compostable; leaves, grass, branches <0.5"	3.1%	61.3%
Glass Bottles and Jars - clear	3.0%	64.3%
Total	**64.3%**	

Table 5-3 provides a composition profile of landfilled residential MSW.

Table 5-3. Composition Profile of Landfilled Residential MSW

Summer+Fall_Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**23.2%**	**1.67%**
	Newsprint	1.4%	0.34%
	High Grade Office Paper	1.2%	0.40%
	Magazines/Catalogs	1.7%	0.36%
	Uncoated OCC	3.5%	0.64%
	Kraft	0.4%	0.11%
	Boxboard	2.6%	0.27%
	Mixed Paper - Recyclable	3.0%	0.33%
	Compostable Paper and 'other' paper	9.3%	0.73%
	Milk and Juice cartons/boxes, coated	0.2%	0.04%
Plastics		**15.5%**	**0.88%**
	#1 PET Bottles/Jars	2.3%	0.20%
	#1 Other PET Containers & Packaging	0.4%	0.08%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.06%
	#2 HDPE Bottles/ Jars - Color	0.6%	0.10%
	#2 Other HDPE Containers & Packaging	0.1%	0.06%
	#6 Expanded Polystyrene Packaging (EPS)	1.1%	0.11%
	#3-#7 Other - All	1.8%	0.16%
	Other Rigid Plastic Products	1.7%	0.40%
	Grocery & Merchandise Bags	1.1%	0.11%
	Trash Bags	1.7%	0.18%
	Commercial & Industrial Film	0.4%	0.19%
	Other Film	2.4%	0.18%
	Remainder/ Composite Plastic	1.4%	0.29%
Glass		**5.4%**	**0.59%**
	Glass Bottles and Jars - clear	3.0%	0.34%
	Glass Bottles and Jars - brown	1.5%	0.29%
	Glass Bottles and Jars - green	0.9%	0.20%
	Glass Bottles and Jars - blue	0.0%	0.03%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.02%

		Mean	+/-
Misc. Inorganic		**6.3%**	**1.97%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.17%
	Electronic Equipment	1.0%	0.41%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.1%	1.68%
Organics		**31.9%**	**2.27%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	3.1%	1.05%
	Yard Waste - Woody; branch >0.5"	0.1%	0.05%
	Food Scraps	20.8%	1.61%
	Bottom Fines and Dirt	0.9%	0.39%
	Diapers	3.7%	0.61%
	Other Organic	3.2%	0.76%
Metals		**3.5%**	**0.43%**
	Aluminum Beverage Containers	0.9%	0.13%
	Other Aluminum	0.3%	0.07%
	Ferrous containers (bi-metal cans)	1.2%	0.15%
	Aerosol cans	0.2%	0.05%
	Other Ferrous	0.6%	0.30%
	Other Non-Ferrous	0.0%	0.02%
	Other Metal	0.3%	0.15%
Textiles		**5.9%**	**0.94%**
	Carpet and carpet padding	0.8%	0.51%
	Clothing and other textiles	5.1%	0.79%
HHW		**0.8%**	**0.28%**
	Household Hazardous Waste materials	0.8%	0.28%
C&D		**7.4%**	**2.52%**
	Construction and Demolition materials	7.4%	2.52%
Total Percentage		100.0%	

5.3.2 Landfilled ICI MSW Composition

Figure 5-2 shows the percentage, by weight, of each of the nine material classes for the landfilled ICI MSW sector. Paper, Organics, and Plastics account for over 63% (27.9%, 18.5%, and 16.9%, respectively) of the landfilled MSW for this sector.

Figure 5-2. Composition of Landfilled ICI MSW by Material Class

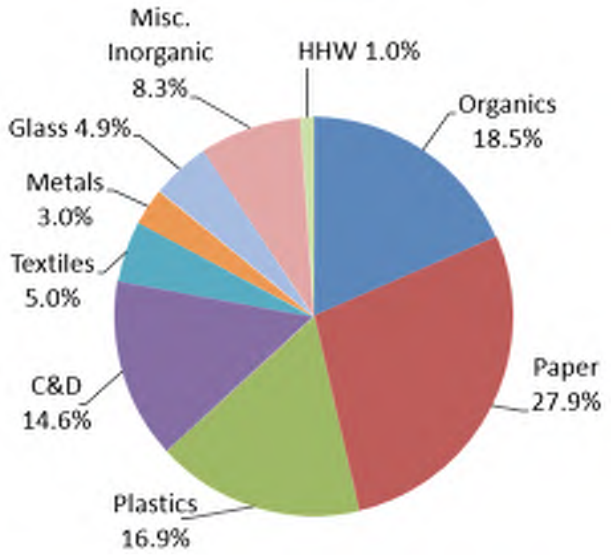


Table 5-4 lists the top ten material categories that were found in the landfilled ICI MSW sector. These ten categories account for approximately 68% of landfilled ICI MSW. Construction and Demolition materials, Food Scraps, and Uncoated OCC material categories account for 37.4% (14.6%, 12.7%, and 10.1%, respectively) of landfilled ICI MSW.

Table 5-4. Top Ten Individual Material Categories in Landfilled ICI MSW

Category	Waste Composition %	Cum. %
Construction and Demolition materials	14.6%	14.6%
Food Scraps	12.7%	27.3%
Uncoated OCC	10.1%	37.4%
Compostable Paper and 'other' paper	9.4%	46.7%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.6%	53.3%
Clothing and other textiles	4.6%	57.9%
Boxboard	3.6%	61.5%
Trash Bags	2.4%	63.9%
Other Film	2.3%	66.2%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.3%	68.5%
Total	68.5%	

Table 5-5 provides the composition profile of the landfilled ICI MSW sector.

Table 5-5. Composition Profile of Landfilled ICI MSW

Summer+Fall_Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**27.9%**	**2.90%**
	Newsprint	0.5%	0.18%
	High Grade Office Paper	1.1%	0.42%
	Magazines/Catalogs	0.8%	0.22%
	Uncoated OCC	10.1%	1.49%
	Kraft	0.7%	0.41%
	Boxboard	3.6%	1.58%
	Mixed Paper - Recyclable	1.7%	0.35%
	Compostable Paper and 'other' paper	9.4%	2.09%
	Milk and Juice cartons/boxes, coated	0.1%	0.03%
Plastics		**16.9%**	**2.13%**
	#1 PET Bottles/Jars	1.4%	0.20%
	#1 Other PET Containers & Packaging	0.3%	0.09%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.26%
	#2 HDPE Bottles/ Jars - Color	0.8%	0.52%
	#2 Other HDPE Containers & Packaging	0.1%	0.05%
	#6 Expanded Polystyrene Packaging (EPS)	1.1%	0.39%
	#3-#7 Other - All	1.3%	0.20%
	Other Rigid Plastic Products	1.8%	0.60%
	Grocery & Merchandise Bags	0.7%	0.12%
	Trash Bags	2.4%	1.17%
	Commercial & Industrial Film	2.2%	0.93%
	Other Film	2.3%	0.33%
	Remainder/ Composite Plastic	2.1%	0.84%
Glass		**4.9%**	**1.73%**
	Glass Bottles and Jars - clear	1.8%	0.39%
	Glass Bottles and Jars - brown	0.9%	0.30%
	Glass Bottles and Jars - green	1.1%	0.66%
	Glass Bottles and Jars - blue	0.1%	0.06%
	Flat Glass	1.0%	1.53%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**8.3%**	**2.54%**
	Televisions	0.7%	0.61%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.12%
	Electronic Equipment	0.8%	0.34%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.6%	2.37%
Organics		**18.5%**	**2.82%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.3%	1.25%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	12.7%	2.26%
	Bottom Fines and Dirt	1.1%	0.56%
	Diapers	1.5%	0.44%
	Other Organic	0.9%	0.29%
Metals		**3.0%**	**0.57%**
	Aluminum Beverage Containers	0.6%	0.10%
	Other Aluminum	0.2%	0.08%
	Ferrous containers (bi-metal cans)	0.5%	0.16%
	Aerosol cans	0.1%	0.03%
	Other Ferrous	1.1%	0.42%
	Other Non-Ferrous	0.1%	0.08%
	Other Metal	0.4%	0.22%
Textiles		**5.0%**	**1.50%**
	Carpet and carpet padding	0.4%	0.37%
	Clothing and other textiles	4.6%	1.44%
HHW		**1.0%**	**0.55%**
	Household Hazardous Waste materials	1.0%	0.55%
C&D		**14.6%**	**3.73%**
	Construction and Demolition materials	14.6%	3.73%
Total Percentage		100.0%	

5.3.3 Landfilled Combined Residential/ICI MSW Composition

Figure 5-3 shows the percentage, by weight, of each of the nine material classes for the combined residential and ICI MSW sectors. Paper, Organics, and Plastics account for approximately 66% (26.3%, 22.9%, and 16.4%, respectively) of the landfilled combined residential/ICI MSW.

Figure 5-3. Composition of Landfilled Combined Residential/ICI MSW by Material Class

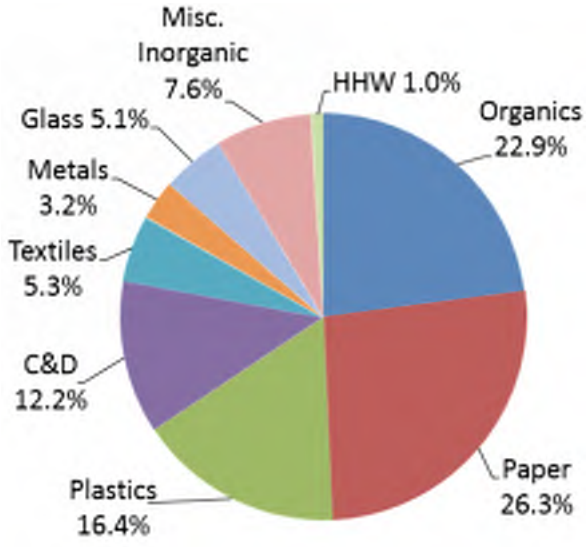


Table 5-6 lists the top ten material categories that were found in the landfilled combined residential/ ICI MSW. These ten categories account for approximately 66% of landfilled residential/ICI MSW. Food Scraps, Construction and Demolition materials, and Compostable Paper and 'other' paper material categories account for 36.9% (15.4%, 12.2%, and 9.3%, respectively) of landfilled residential/ICI MSW.

Table 5-6. Top Ten Individual Material Categories in Landfilled Combined Residential/ICI MSW

Category	Waste Composition %	Cum. %
Food Scraps	15.4%	15.4%
Construction and Demolition materials	12.2%	27.6%
Compostable Paper and 'other' paper	9.3%	36.9%
Uncoated OCC	7.9%	44.8%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.1%	50.9%
Clothing and other textiles	4.7%	55.7%
Boxboard	3.2%	58.9%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.6%	61.5%
Other Film	2.3%	63.8%
Diapers	2.3%	66.1%
Total	**66.1%**	

Table 5-7 provides the composition profile of the landfilled combined residential/ICI MSW.

Table 5-7. Composition Profile of Landfilled Residential/ICI MSW

Summer+Fall_Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**26.3%**	**1.30%**
	Newsprint	0.8%	0.09%
	High Grade Office Paper	1.1%	0.19%
	Magazines/Catalogs	1.1%	0.10%
	Uncoated OCC	7.9%	0.66%
	Kraft	0.6%	0.18%
	Boxboard	3.2%	0.70%
	Mixed Paper - Recyclable	2.1%	0.16%
	Compostable Paper and 'other' paper	9.3%	0.94%
	Milk and Juice cartons/boxes, coated	0.1%	0.01%
Plastics		**16.4%**	**0.95%**
	#1 PET Bottles/Jars	1.7%	0.09%
	#1 Other PET Containers & Packaging	0.3%	0.04%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.11%
	#2 HDPE Bottles/ Jars - Color	0.7%	0.23%
	#2 Other HDPE Containers & Packaging	0.1%	0.02%
	#6 Expanded Polystyrene Packaging (EPS)	1.1%	0.17%
	#3-#7 Other - All	1.5%	0.09%
	Other Rigid Plastic Products	1.8%	0.27%
	Grocery & Merchandise Bags	0.8%	0.06%
	Trash Bags	2.2%	0.52%
	Commercial & Industrial Film	1.6%	0.41%
	Other Film	2.3%	0.15%
	Remainder/ Composite Plastic	1.9%	0.37%
Glass		**5.1%**	**0.77%**
	Glass Bottles and Jars - clear	2.2%	0.18%
	Glass Bottles and Jars - brown	1.1%	0.14%
	Glass Bottles and Jars - green	1.0%	0.29%
	Glass Bottles and Jars - blue	0.1%	0.03%
	Flat Glass	0.7%	0.68%
	Other Glass	0.0%	0.01%

		Mean	+/-
Misc. Inorganic		**7.6%**	**1.15%**
	Televisions	0.5%	0.27%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.06%
	Electronic Equipment	0.9%	0.16%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.1%	1.07%
Organics		**22.9%**	**1.28%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.6%	0.57%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	15.4%	1.02%
	Bottom Fines and Dirt	1.1%	0.25%
	Diapers	2.3%	0.21%
	Other Organic	1.7%	0.15%
Metals		**3.2%**	**0.26%**
	Aluminum Beverage Containers	0.7%	0.05%
	Other Aluminum	0.3%	0.04%
	Ferrous containers (bi-metal cans)	0.7%	0.07%
	Aerosol cans	0.1%	0.01%
	Other Ferrous	0.9%	0.19%
	Other Non-Ferrous	0.1%	0.04%
	Other Metal	0.4%	0.10%
Textiles		**5.3%**	**0.67%**
	Carpet and carpet padding	0.5%	0.17%
	Clothing and other textiles	4.7%	0.65%
HHW		**1.0%**	**0.24%**
	Household Hazardous Waste materials	1.0%	0.24%
C&D		**12.2%**	**1.68%**
	Construction and Demolition materials	12.2%	1.68%
Total Percentage		100.0%	

Summing the recoverable materials categories from Papers, Plastics, Glass, and metals as defined in this study's material categories, the summer sort data indicates 30.3% of the landfilled materials were recoverable.

5.3.4 Landfilled USD MSW Composition

In determining the landfilled USD MSW composition for residential and ICI MSW sectors, the samples were identified based on collection route within the USD. Out of 192 samples, a total of 150 (78%) of the samples were collected from the USD MSW sector. 67 (44.7%) USD samples were collected from residential MSW and 83 (55.3%) USD samples were collected from ICI MSW.

5.3.4.1 Landfilled USD Residential MSW

Figure 5-4 shows the percentage, by weight, of each of the ten material classes for the landfilled USD residential MSW subsector. Organics, Paper, and Plastics account for over 69% (31.1%, 22.3%, and 16.0%, respectively) of the landfilled MSW for this sector.

Figure 5-4. Composition of Landfilled USD Residential MSW by Material Class

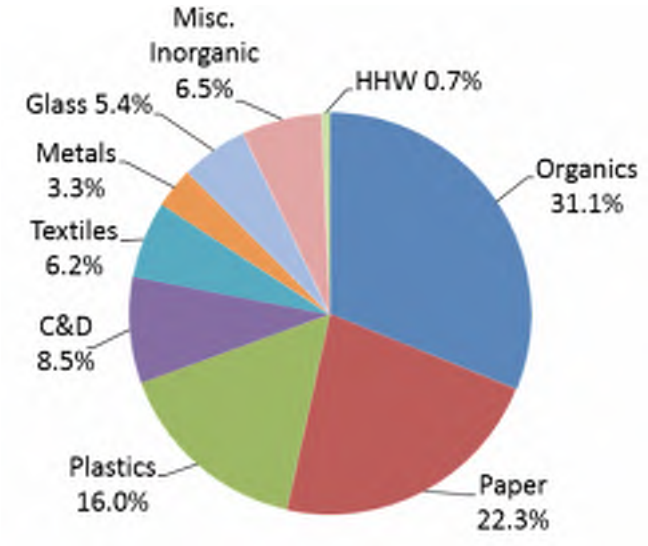


Table 5-8 lists the top ten material categories that were found in the landfilled USD residential MSW subsector. These ten categories account for approximately 66% of landfilled USD residential MSW. Food Scraps, Compostable Paper and 'other' paper, and Construction and Demolition materials material categories account for 37.8% (20.1%, 9.2%, and 8.5%, respectively) of landfilled USD residential MSW.

Table 5-8. Top Ten Individual Material Categories in Landfilled USD Residential MSW

Category	Waste Composition %	Cum. %
Food Scraps	20.1%	20.1%
Compostable Paper and 'other' paper	9.2%	29.3%
Construction and Demolition materials	8.5%	37.8%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.5%	43.4%
Clothing and other textiles	5.3%	48.7%
Diapers	4.1%	52.8%
Yard Waste - Compostable; leaves, grass, branches <0.5"	3.7%	56.5%
Glass Bottles and Jars - clear	3.2%	59.7%
Mixed Paper - Recyclable	3.1%	62.8%
Uncoated OCC	3.1%	65.9%
Total	**65.9%**	

Table 5-9 provides the composition profile of landfilled USD residential MSW.

Table 5-9. Composition Profile of Landfilled Urban Residential MSW

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**22.3%**	**1.99%**
	Newsprint	1.1%	0.28%
	High Grade Office Paper	1.4%	0.61%
	Magazines/Catalogs	1.5%	0.45%
	Uncoated OCC	3.1%	0.62%
	Kraft	0.3%	0.15%
	Boxboard	2.6%	0.36%
	Mixed Paper - Recyclable	3.1%	0.44%
	Compostable Paper and 'other' paper	9.2%	0.79%
	Milk and Juice cartons/boxes, coated	0.1%	0.04%
Plastics		**16.0%**	**0.95%**
	#1 PET Bottles/Jars	2.4%	0.26%
	#1 Other PET Containers & Packaging	0.4%	0.11%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.08%
	#2 HDPE Bottles/ Jars - Color	0.7%	0.13%
	#2 Other HDPE Containers & Packaging	0.1%	0.09%
	#6 Expanded Polystyrene Packaging (EPS)	1.3%	0.16%
	#3-#7 Other - All	1.8%	0.20%
	Other Rigid Plastic Products	1.6%	0.44%
	Grocery & Merchandise Bags	1.1%	0.15%
	Trash Bags	1.8%	0.23%
	Commercial & Industrial Film	0.5%	0.23%
	Other Film	2.4%	0.23%
	Remainder/ Composite Plastic	1.6%	0.43%
Glass		**5.4%**	**0.75%**
	Glass Bottles and Jars - clear	3.2%	0.46%
	Glass Bottles and Jars - brown	1.5%	0.40%
	Glass Bottles and Jars - green	0.6%	0.18%
	Glass Bottles and Jars - blue	0.0%	0.04%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**6.5%**	**1.73%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.25%
	Electronic Equipment	0.7%	0.41%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.5%	1.45%
Organics		**31.1%**	**2.75%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	3.7%	1.46%
	Yard Waste - Woody; branch >0.5"	0.0%	0.04%
	Food Scraps	20.1%	1.94%
	Bottom Fines and Dirt	0.8%	0.25%
	Diapers	4.1%	0.84%
	Other Organic	2.4%	0.60%
Metals		**3.3%**	**0.51%**
	Aluminum Beverage Containers	0.9%	0.13%
	Other Aluminum	0.3%	0.06%
	Ferrous containers (bi-metal cans)	1.1%	0.15%
	Aerosol cans	0.2%	0.05%
	Other Ferrous	0.7%	0.43%
	Other Non-Ferrous	0.0%	0.04%
	Other Metal	0.1%	0.14%
Textiles		**6.2%**	**1.22%**
	Carpet and carpet padding	0.8%	0.63%
	Clothing and other textiles	5.3%	1.06%
HHW		**0.7%**	**0.23%**
	Household Hazardous Waste materials	0.7%	0.23%
C&D		**8.5%**	**3.51%**
	Construction and Demolition materials	8.5%	3.51%
Total Percentage		100.0%	

5.3.4.3 Landfilled USD ICI MSW

Figure 5-5 shows the percentage, by weight, of each of the ten material classes for the landfilled USD ICI MSW subsector. Paper, Organics, and Plastics account for approximately 63% (28.2%, 18.1%, and 16.6%, respectively) of the landfilled MSW for this subsector.

Figure 5-5. Composition of Landfilled USD ICI MSW by Material Class

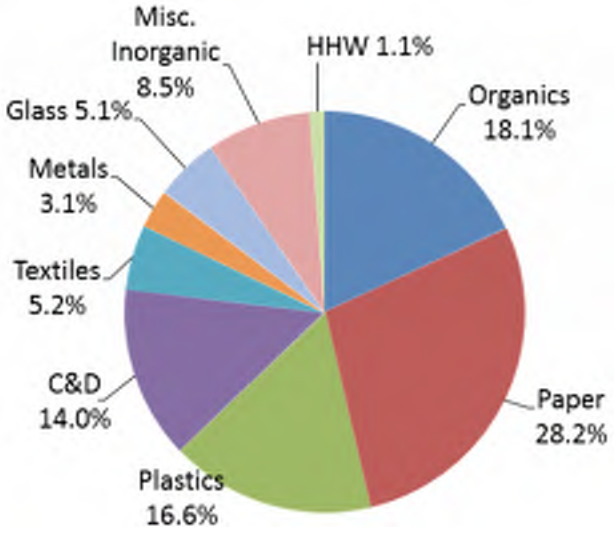


Table 5-10 lists the top ten material categories that were found in the landfilled USD ICI MSW subsector. These ten categories account for approximately 68% of the landfilled USD ICI MSW. Construction and Demolition materials, Food Scraps, and Uncoated OCC material categories account for 37.2% (14%, 12.7%, and 10.5%, respectively) of landfilled USD ICI MSW.

Table 5-10. Top Ten Individual Material Categories in Landfilled USD ICI MSW

Category	Waste Composition %	Cum. %
Construction and Demolition materials	14.0%	14.0%
Food Scraps	12.7%	26.7%
Uncoated OCC	10.5%	37.2%
Compostable Paper and 'other' paper	9.7%	46.9%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.8%	53.6%
Clothing and other textiles	4.8%	58.5%
Boxboard	3.0%	61.4%
Trash Bags	2.7%	64.1%
Other Film	2.2%	66.3%
Commercial & Industrial Film	2.1%	68.4%
Total	**68.4%**	

Table 5-11 provides the composition profile of the landfilled USD ICI MSW sector.

Table 5-11. Composition Profile of Landfilled Urban ICI MSW

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**28.2%**	**3.12%**
	Newsprint	0.5%	0.20%
	High Grade Office Paper	1.2%	0.48%
	Magazines/Catalogs	0.8%	0.23%
	Uncoated OCC	10.5%	1.63%
	Kraft	0.7%	0.47%
	Boxboard	3.0%	1.20%
	Mixed Paper - Recyclable	1.8%	0.39%
	Compostable Paper and 'other' paper	9.7%	2.38%
	Milk and Juice cartons/boxes, coated	0.1%	0.03%
Plastics		**16.6%**	**2.28%**
	#1 PET Bottles/Jars	1.4%	0.22%
	#1 Other PET Containers & Packaging	0.3%	0.10%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.30%
	#2 HDPE Bottles/ Jars - Color	0.6%	0.44%
	#2 Other HDPE Containers & Packaging	0.1%	0.05%
	#6 Expanded Polystyrene Packaging (EPS)	0.9%	0.18%
	#3-#7 Other - All	1.3%	0.22%
	Other Rigid Plastic Products	2.0%	0.68%
	Grocery & Merchandise Bags	0.6%	0.13%
	Trash Bags	2.7%	1.35%
	Commercial & Industrial Film	2.1%	0.97%
	Other Film	2.2%	0.34%
	Remainder/ Composite Plastic	1.9%	0.77%
Glass		**5.1%**	**1.97%**
	Glass Bottles and Jars - clear	1.8%	0.43%
	Glass Bottles and Jars - brown	0.9%	0.34%
	Glass Bottles and Jars - green	1.1%	0.75%
	Glass Bottles and Jars - blue	0.1%	0.07%
	Flat Glass	1.2%	1.76%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**8.5%**	**2.72%**
	Televisions	0.8%	0.71%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.14%
	Electronic Equipment	0.8%	0.36%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.8%	2.54%
Organics		**18.1%**	**3.00%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.1%	1.33%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	12.7%	2.46%
	Bottom Fines and Dirt	1.2%	0.65%
	Diapers	1.4%	0.43%
	Other Organic	0.8%	0.26%
Metals		**3.1%**	**0.64%**
	Aluminum Beverage Containers	0.6%	0.11%
	Other Aluminum	0.2%	0.09%
	Ferrous containers (bi-metal cans)	0.5%	0.18%
	Aerosol cans	0.1%	0.03%
	Other Ferrous	1.2%	0.47%
	Other Non-Ferrous	0.1%	0.08%
	Other Metal	0.4%	0.24%
Textiles		**5.2%**	**1.69%**
	Carpet and carpet padding	0.4%	0.41%
	Clothing and other textiles	4.8%	1.64%
HHW		**1.1%**	**0.63%**
	Household Hazardous Waste materials	1.1%	0.63%
C&D		**14.0%**	**3.61%**
	Construction and Demolition materials	14.0%	3.61%
Total Percentage		100.0%	

5.3.4.4 Landfilled USD Residential/ICI MSW Composition

Figure 5-6 shows the percentage, by weight, of each of the ten material classes for the landfilled USD residential/ICI MSW sector. Paper, Organics, and Plastics account for over 65% (26.3%, 22.4%, and 16.4%, respectively) of the landfilled MSW for this sector.

Figure 5-6. Composition of Landfilled USD Residential/ICI MSW by Material Class

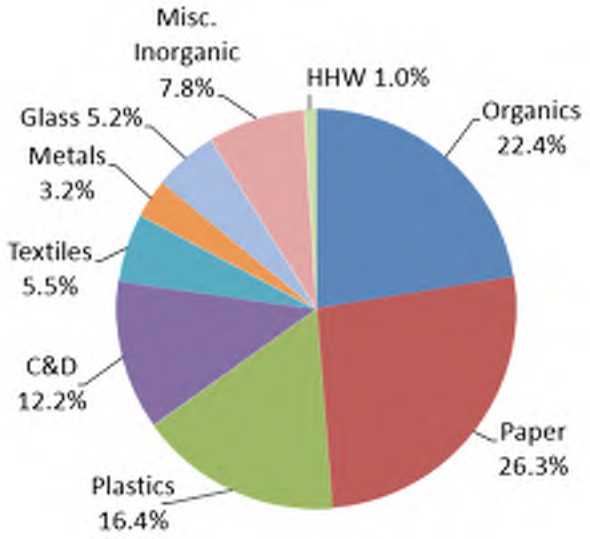


Table 5-12 lists the top ten material categories that were found in the landfilled USD residential/ICI MSW sector. These ten categories account for approximately 66% of landfilled USD MSW. Food Scraps, Construction and Demolition materials, and Compostable Paper and 'other' paper material categories account for 36.8% (15.2%, 12.2%, and 9.5%, respectively) of landfilled USD residential/ICI MSW.

Table 5-12. Top Ten Individual Material Categories in Landfilled USD Residential/ICI MSW

Category	Waste Composition %	Cum. %
Food Scraps	15.2%	15.2%
Construction and Demolition materials	12.2%	27.3%
Compostable Paper and 'other' paper	9.5%	36.8%
Uncoated OCC	8.1%	44.9%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.3%	51.2%
Clothing and other textiles	5.0%	56.2%
Boxboard	2.8%	59.1%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.6%	61.7%
Trash Bags	2.4%	64.1%
Diapers	2.3%	66.3%
Total	**66.3%**	

Table 5-13 provides the composition profile of landfilled USD residential/ICI MSW.

Table 5-13. Composition Profile of Landfilled Urban Residential/ICI MSW Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**26.3%**	**1.41%**
	Newsprint	0.7%	0.09%
	High Grade Office Paper	1.3%	0.22%
	Magazines/Catalogs	1.0%	0.11%
	Uncoated OCC	8.1%	0.73%
	Kraft	0.6%	0.21%
	Boxboard	2.8%	0.54%
	Mixed Paper - Recyclable	2.2%	0.18%
	Compostable Paper and 'other' paper	9.5%	1.06%
	Milk and Juice cartons/boxes, coated	0.1%	0.01%
Plastics		**16.4%**	**1.02%**
	#1 PET Bottles/Jars	1.7%	0.10%
	#1 Other PET Containers & Packaging	0.3%	0.05%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.13%
	#2 HDPE Bottles/ Jars - Color	0.6%	0.20%
	#2 Other HDPE Containers & Packaging	0.1%	0.03%
	#6 Expanded Polystyrene Packaging (EPS)	1.1%	0.08%
	#3-#7 Other - All	1.5%	0.10%
	Other Rigid Plastic Products	1.8%	0.30%
	Grocery & Merchandise Bags	0.8%	0.06%
	Trash Bags	2.4%	0.60%
	Commercial & Industrial Film	1.6%	0.43%
	Other Film	2.3%	0.15%
	Remainder/ Composite Plastic	1.8%	0.34%
Glass		**5.2%**	**0.88%**
	Glass Bottles and Jars - clear	2.3%	0.20%
	Glass Bottles and Jars - brown	1.1%	0.16%
	Glass Bottles and Jars - green	1.0%	0.33%
	Glass Bottles and Jars - blue	0.1%	0.03%
	Flat Glass	0.8%	0.78%
	Other Glass	0.0%	0.02%

		Mean	+/-
Misc. Inorganic		**7.8%**	**1.22%**
	Televisions	0.5%	0.31%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.07%
	Electronic Equipment	0.8%	0.17%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.3%	1.14%
Organics		**22.4%**	**1.37%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.6%	0.61%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	15.2%	1.12%
	Bottom Fines and Dirt	1.1%	0.29%
	Diapers	2.3%	0.21%
	Other Organic	1.3%	0.13%
Metals		**3.2%**	**0.29%**
	Aluminum Beverage Containers	0.7%	0.05%
	Other Aluminum	0.3%	0.04%
	Ferrous containers (bi-metal cans)	0.7%	0.08%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	1.0%	0.22%
	Other Non-Ferrous	0.1%	0.04%
	Other Metal	0.3%	0.11%
Textiles		**5.5%**	**0.77%**
	Carpet and carpet padding	0.5%	0.19%
	Clothing and other textiles	5.0%	0.74%
HHW		**1.0%**	**0.28%**
	Household Hazardous Waste materials	1.0%	0.28%
C&D		**12.2%**	**1.65%**
	Construction and Demolition materials	12.2%	1.65%
Total Percentage		100.0%	

5.3.5 Landfilled GSD MSW Composition

In determining the landfilled GSD MSW composition for the residential and ICI sectors, the samples were split based on collection route within the GSD (including satellite cities). Out of 192 samples collected, a total of 42 (22%) samples were collected from the GSD MSW sector, 29 (69%) GSD samples were collected from the GSD residential MSW subsector and 13 (31%) GSD samples were collected from the GSD ICI MSW subsector.

5.3.5.1 Landfilled GSD Residential MSW

Figure 5-7 shows the percentage, by weight, of each of the ten material classes for the landfilled GSD residential MSW subsector. Organics, Paper, and Plastics account for approximately 76% (35.0%, 26.4%, and 14.5%, respectively) of the total MSW for this sector.

Figure 5-7. Composition of Landfilled GSD Residential MSW by Material Class

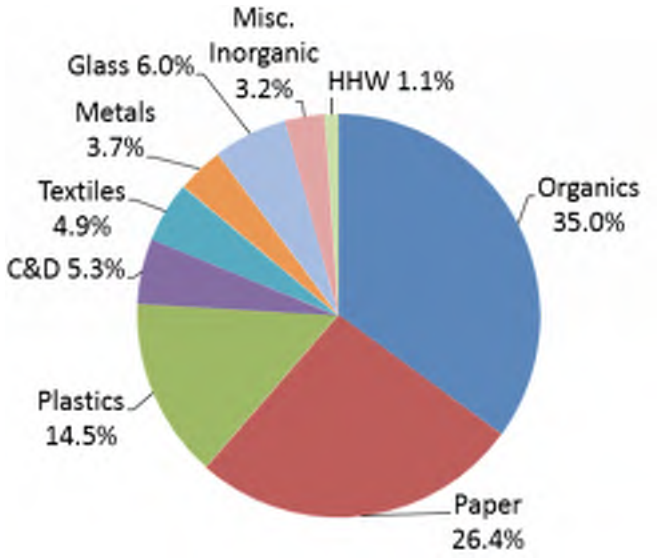


Table 5-14 lists the top ten material categories that were found in the landfilled GSD residential MSW subsector. These ten categories account for approximately 64% of the landfilled GSD residential MSW. Food Scraps, Compostable Paper and 'other' paper, and Other Organic material categories account for 37.8% (22.4%, 10%, and 5.3%, respectively) of the landfilled GSD residential MSW.

Table 5-14. Top Ten Individual Material Categories in Landfilled GSD Residential MSW

Category	Waste Composition %	Cum. %
Food Scraps	22.4%	22.4%
Compostable Paper and 'other' paper	10.0%	32.5%
Other Organic	5.3%	37.8%
Construction and Demolition materials	5.3%	43.0%
Uncoated OCC	4.7%	47.7%
Clothing and other textiles	4.0%	51.7%
Diapers	3.5%	55.2%
Boxboard	2.9%	58.1%
Mixed Paper - Recyclable	2.8%	60.9%
Glass Bottles and Jars - clear	2.8%	63.7%
Total	**63.7%**	

Table 5-15 provides the composition profile of landfilled GSD residential MSW.

Table 5-15. Composition Profile of Landfilled Rural Residential MSW

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**26.4%**	**2.72%**
	Newsprint	1.9%	0.61%
	High Grade Office Paper	0.9%	0.30%
	Magazines/Catalogs	2.4%	0.63%
	Uncoated OCC	4.7%	1.49%
	Kraft	0.5%	0.16%
	Boxboard	2.9%	0.40%
	Mixed Paper - Recyclable	2.8%	0.56%
	Compostable Paper and 'other' paper	10.0%	1.49%
	Milk and Juice cartons/boxes, coated	0.3%	0.08%
Plastics		**14.5%**	**1.99%**
	#1 PET Bottles/Jars	2.1%	0.32%
	#1 Other PET Containers & Packaging	0.5%	0.09%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.09%
	#2 HDPE Bottles/ Jars - Color	0.6%	0.13%
	#2 Other HDPE Containers & Packaging	0.0%	0.02%
	#6 Expanded Polystyrene Packaging (EPS)	0.9%	0.14%
	#3-#7 Other - All	1.8%	0.30%
	Other Rigid Plastic Products	1.3%	0.61%
	Grocery & Merchandise Bags	1.1%	0.15%
	Trash Bags	1.6%	0.31%
	Commercial & Industrial Film	0.3%	0.40%
	Other Film	2.6%	0.25%
	Remainder/ Composite Plastic	1.3%	0.34%
Glass		**6.0%**	**0.99%**
	Glass Bottles and Jars - clear	2.8%	0.50%
	Glass Bottles and Jars - brown	1.7%	0.45%
	Glass Bottles and Jars - green	1.4%	0.45%
	Glass Bottles and Jars - blue	0.0%	0.06%
	Flat Glass	0.0%	0.01%
	Other Glass	0.0%	0.02%

		Mean	+/-
Misc. Inorganic		**3.2%**	**1.52%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.21%
	Electronic Equipment	0.9%	0.54%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	2.1%	1.37%
Organics		**35.0%**	**3.78%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.4%	1.58%
	Yard Waste - Woody; branch >0.5"	0.1%	0.10%
	Food Scraps	22.4%	2.85%
	Bottom Fines and Dirt	1.3%	1.10%
	Diapers	3.5%	0.93%
	Other Organic	5.3%	1.86%
Metals		**3.7%**	**0.77%**
	Aluminum Beverage Containers	0.8%	0.19%
	Other Aluminum	0.4%	0.16%
	Ferrous containers (bi-metal cans)	1.4%	0.32%
	Aerosol cans	0.2%	0.11%
	Other Ferrous	0.5%	0.37%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.5%	0.36%
Textiles		**4.9%**	**1.50%**
	Carpet and carpet padding	0.9%	0.99%
	Clothing and other textiles	4.0%	1.06%
HHW		**1.1%**	**0.73%**
	Household Hazardous Waste materials	1.1%	0.73%
C&D		**5.3%**	**3.71%**
	Construction and Demolition materials	5.3%	3.71%
Total Percentage		100.0%	

5.3.5.2 Landfilled GSD ICI MSW

Figure 5-8 shows the percentage, by weight, of each of the ten material classes for the landfilled GSD ICI MSW subsector. Paper, Organics, and Plastics account for over 65% (25.8%, 20.9%, and 18.8%, respectively) of the landfilled MSW for this subsector.

Figure 5-8. Composition of Landfilled GSD ICI MSW by Material Class

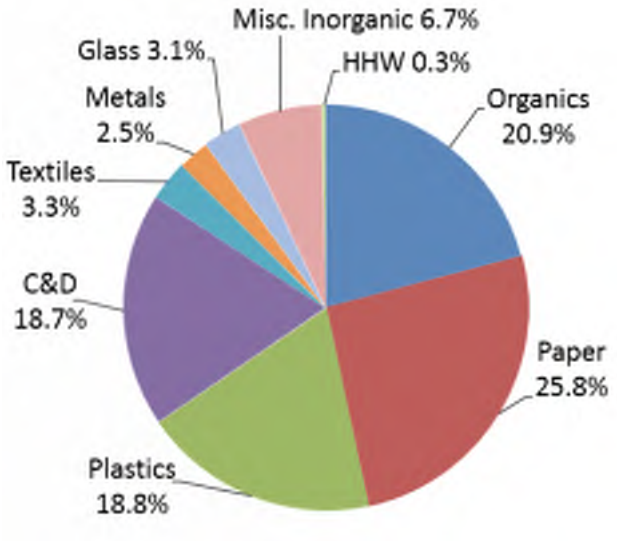


Table 5-16 lists the top ten material categories that were found in the landfilled GSD ICI MSW subsector. These ten categories account for approximately 71% of landfilled GSD ICI MSW. Construction and Demolition materials, Food Scraps, and Compostable Paper and 'other' paper material categories account for 39% (18.7%, 12.8%, and 7.5%, respectively) of landfilled GSD ICI MSW.

Table 5-16. Top Ten Individual Material Categories in Landfilled GSD ICI MSW

Category	Waste Composition %	Cum. %
Construction and Demolition materials	18.7%	18.7%
Food Scraps	12.8%	31.5%
Compostable Paper and 'other' paper	7.5%	39.0%
Boxboard	7.5%	46.6%
Uncoated OCC	6.9%	53.5%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.5%	59.0%
Yard Waste - Compostable; leaves, grass, branches <0.5"	3.5%	62.5%
Remainder/ Composite Plastic	3.3%	65.7%
Other Film	2.9%	68.6%
Clothing and other textiles	2.8%	71.4%
Total	**71.4%**	

Table 5-17 provides the composition profile of landfilled GSD ICI MSW.

Table 5-17. Composition Profile of Landfilled Rural ICI MSW

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**25.8%**	**8.08%**
	Newsprint	0.4%	0.39%
	High Grade Office Paper	0.4%	0.38%
	Magazines/Catalogs	1.1%	0.63%
	Uncoated OCC	6.9%	3.13%
	Kraft	0.5%	0.50%
	Boxboard	7.5%	8.94%
	Mixed Paper - Recyclable	1.2%	0.54%
	Compostable Paper and 'other' paper	7.5%	2.64%
	Milk and Juice cartons/boxes, coated	0.1%	0.10%
Plastics		**18.8%**	**6.17%**
	#1 PET Bottles/Jars	1.3%	0.48%
	#1 Other PET Containers & Packaging	0.3%	0.17%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.14%
	#2 HDPE Bottles/ Jars - Color	1.9%	2.61%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	2.2%	2.67%
	#3-#7 Other - All	0.9%	0.48%
	Other Rigid Plastic Products	1.1%	0.95%
	Grocery & Merchandise Bags	0.8%	0.36%
	Trash Bags	1.0%	0.52%
	Commercial & Industrial Film	2.7%	3.05%
	Other Film	2.9%	1.16%
	Remainder/ Composite Plastic	3.3%	3.91%
Glass		**3.1%**	**1.98%**
	Glass Bottles and Jars - clear	1.6%	0.94%
	Glass Bottles and Jars - brown	0.4%	0.29%
	Glass Bottles and Jars - green	1.0%	0.93%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.05%
	Other Glass	0.0%	0.02%

		Mean	+/-
Misc. Inorganic		**6.7%**	**7.43%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.01%
	Electronic Equipment	1.2%	0.97%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.5%	6.75%
Organics		**20.9%**	**8.53%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	3.5%	3.72%
	Yard Waste - Woody; branch >0.5"	0.1%	0.10%
	Food Scraps	12.8%	5.87%
	Bottom Fines and Dirt	0.4%	0.32%
	Diapers	2.5%	1.76%
	Other Organic	1.7%	1.35%
Metals		**2.5%**	**0.93%**
	Aluminum Beverage Containers	0.5%	0.26%
	Other Aluminum	0.2%	0.12%
	Ferrous containers (bi-metal cans)	0.4%	0.21%
	Aerosol cans	0.0%	0.03%
	Other Ferrous	0.7%	0.66%
	Other Non-Ferrous	0.2%	0.29%
	Other Metal	0.4%	0.56%
Textiles		**3.3%**	**2.11%**
	Carpet and carpet padding	0.5%	0.77%
	Clothing and other textiles	2.8%	1.84%
HHW		**0.3%**	**0.19%**
	Household Hazardous Waste materials	0.3%	0.19%
C&D		**18.7%**	**15.61%**
	Construction and Demolition materials	18.7%	15.61%
Total Percentage		100.0%	

5.3.5.4 Landfilled GSD Residential/ICI MSW Composition

Figure 5-9 shows the percentage, by weight, of each of the ten material classes for the landfilled GSD residential/ICI MSW sector. Paper, Organics, and Plastics account for approximately 69% (26.0%, 25.6%, and 17.4%, respectively) of the landfilled MSW for this sector.

Figure 5-9. Composition of Landfilled GSD Residential/ICI MSW by Material Class

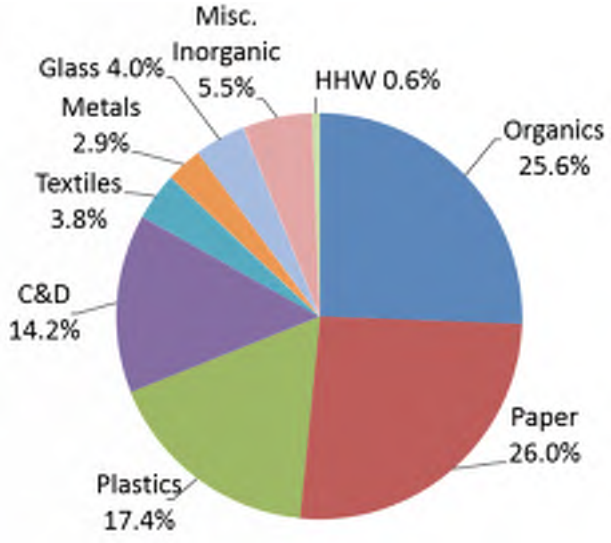


Table 5-18 lists the top ten material categories that were found in the landfilled GSD residential/ICI MSW sector. These ten categories account for approximately 67% of landfilled GSD residential/ICI MSW. Food Scraps, Construction and Demolition materials, and Compostable Paper and 'other' paper material categories account for 38.6% (16%, 14.2%, and 8.4%, respectively) of landfilled GSD residential/ICI MSW.

Table 5-18. Top Ten Individual Material Categories in Landfilled GSD Residential/ICI MSW

Category	Waste Composition %	Cum. %
Food Scraps	16.0%	16.0%
Construction and Demolition materials	14.2%	30.2%
Compostable Paper and 'other' paper	8.4%	38.6%
Uncoated OCC	6.2%	44.8%
Boxboard	6.0%	50.7%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	4.4%	55.1%
Clothing and other textiles	3.2%	58.3%
Yard Waste - Compostable; leaves, grass, branches <0.5"	3.1%	61.4%
Other Organic	2.9%	64.3%
Diapers	2.8%	67.1%
Total	67.1%	

Table 5-19 provides the composition profile of landfilled GSD residential/ICI MSW.

Table 5-19. Composition Profile of Landfilled Rural Residential/ICI MSW Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**26.0%**	**3.61%**
	Newsprint	0.9%	0.19%
	High Grade Office Paper	0.6%	0.17%
	Magazines/Catalogs	1.5%	0.29%
	Uncoated OCC	6.2%	1.40%
	Kraft	0.5%	0.22%
	Boxboard	6.0%	3.98%
	Mixed Paper - Recyclable	1.8%	0.25%
	Compostable Paper and 'other' paper	8.4%	1.19%
	Milk and Juice cartons/boxes, coated	0.2%	0.05%
Plastics		**17.4%**	**2.75%**
	#1 PET Bottles/Jars	1.6%	0.21%
	#1 Other PET Containers & Packaging	0.4%	0.07%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.06%
	#2 HDPE Bottles/ Jars - Color	1.5%	1.16%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	1.8%	1.19%
	#3-#7 Other - All	1.2%	0.22%
	Other Rigid Plastic Products	1.2%	0.43%
	Grocery & Merchandise Bags	0.9%	0.16%
	Trash Bags	1.2%	0.24%
	Commercial & Industrial Film	1.9%	1.36%
	Other Film	2.8%	0.51%
	Remainder/ Composite Plastic	2.6%	1.74%
Glass		**4.0%**	**0.89%**
	Glass Bottles and Jars - clear	2.0%	0.42%
	Glass Bottles and Jars - brown	0.9%	0.14%
	Glass Bottles and Jars - green	1.1%	0.42%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.0%	0.02%
	Other Glass	0.0%	0.01%

		Mean	+/-
Misc. Inorganic		**5.5%**	**3.31%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.02%
	Electronic Equipment	1.1%	0.43%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	4.4%	3.01%
Organics		**25.6%**	**3.82%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	3.1%	1.66%
	Yard Waste - Woody; branch >0.5"	0.1%	0.04%
	Food Scraps	16.0%	2.63%
	Bottom Fines and Dirt	0.7%	0.19%
	Diapers	2.8%	0.79%
	Other Organic	2.9%	0.64%
Metals		**2.9%**	**0.42%**
	Aluminum Beverage Containers	0.6%	0.12%
	Other Aluminum	0.3%	0.06%
	Ferrous containers (bi-metal cans)	0.7%	0.10%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	0.6%	0.30%
	Other Non-Ferrous	0.2%	0.13%
	Other Metal	0.4%	0.25%
Textiles		**3.8%**	**0.95%**
	Carpet and carpet padding	0.6%	0.36%
	Clothing and other textiles	3.2%	0.82%
HHW		**0.6%**	**0.12%**
	Household Hazardous Waste materials	0.6%	0.12%
C&D		**14.2%**	**6.96%**
	Construction and Demolition materials	14.2%	6.96%
Total Percentage		100.0%	

5.3.6 Landfilled Metro MSW Composition

The sample data has also been evaluated to compare the waste composition of Metro and non-Metro waste collection routes. Metro collection is provided by Metro trucks and subcontracted out to Rock River Disposal and the collection routes include:

- ICI within the Central Business District (CBD);
- Residential single-family homes (SFH) within the USD; and
- Convenience Centers

All collection routes not listed above and all collection provided by private haulers is categorized as "non-Metro". **Table 5-20** summarizes the summer and fall samples combined that were used to determine the landfilled MSW composition. A total of 192 waste samples were processed. Of the 192 samples processed, 49 (26%) were Metro collected waste and 143 (74%) were non-Metro collection. 46 (93.9%) Metro samples were collected from residential MSW sector and 3 (6.1%) Metro samples were collected from ICI MSW.

Table 5-20. Number of Landfilled Samples by Collection Route

Sampling Group	Sample Count		Total Sample Wt.
	No.	%	(pounds)
Metro	49	100%	10,538
RES	*46*	*93.9%*	*9,986*
ICI	*3*	*6.1%*	*552*
Non-Metro	143	100%	31,598
RES	*50*	*35.0%*	*10,599*
ICI	*93*	*65.0%*	*20,999*
Total	**192**	**100%**	**42,136**

5.3.6.1 Landfilled Metro Residential MSW

Figure 5-10 shows the percentage, by weight, of each of the ten material classes for the landfilled Metro residential MSW subsector. Organics, Paper, and Plastics account for approximately 63% (27.9%, 19.5%, and 15.4%, respectively) of the landfilled MSW for this sector.

Figure 5-10. Composition of Landfilled Metro Residential MSW by Material Class

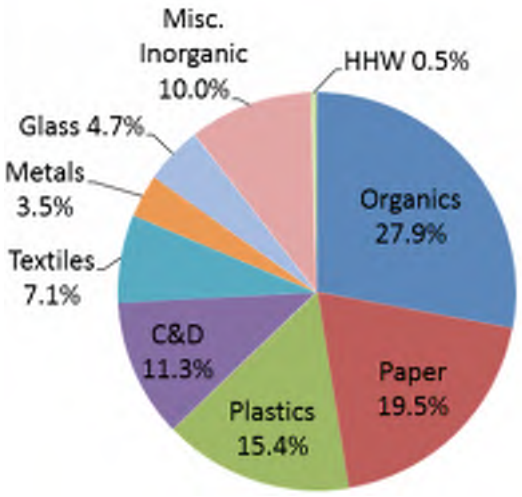


Table 5-21 lists the top ten material categories that were found in the landfilled Metro residential MSW subsector. These ten categories account for approximately 67% of landfilled Metro residential MSW. Food Scraps, Construction and Demolition materials, and Compostable Paper and 'other' paper material categories account for 36.8% (17.2%, 11.3%, and 8.3%, respectively) of landfilled Metro residential MSW.

Table 5-21. Top Ten Individual Material Categories in Landfilled Metro Residential MSW

Category	Waste Composition %	Cum. %
Food Scraps	17.2%	17.2%
Construction and Demolition materials	11.3%	28.5%
Compostable Paper and 'other' paper	8.3%	36.8%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	8.1%	45.0%
Clothing and other textiles	5.8%	50.8%
Yard Waste - Compostable; leaves, grass, branches <0.5"	4.2%	55.0%
Diapers	3.8%	58.8%
Mixed Paper - Recyclable	3.0%	61.8%
Uncoated OCC	2.8%	64.6%
Glass Bottles and Jars - clear	2.7%	67.3%
Total	**67.3%**	

Table 5-22 provides the composition profile of landfilled Metro residential MSW.

Table 5-22. Composition Profile of Landfilled Metro Residential MSW

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**19.5%**	**2.47%**
	Newsprint	0.9%	0.52%
	High Grade Office Paper	1.2%	0.77%
	Magazines/Catalogs	1.0%	0.35%
	Uncoated OCC	2.8%	0.77%
	Kraft	0.2%	0.12%
	Boxboard	2.0%	0.33%
	Mixed Paper - Recyclable	3.0%	0.48%
	Compostable Paper and 'other' paper	8.3%	1.25%
	Milk and Juice cartons/boxes, coated	0.1%	0.05%
Plastics		**15.4%**	**1.46%**
	#1 PET Bottles/Jars	2.2%	0.34%
	#1 Other PET Containers & Packaging	0.4%	0.15%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.08%
	#2 HDPE Bottles/ Jars - Color	0.5%	0.13%
	#2 Other HDPE Containers & Packaging	0.2%	0.15%
	#6 Expanded Polystyrene Packaging (EPS)	1.2%	0.19%
	#3-#7 Other - All	1.6%	0.24%
	Other Rigid Plastic Products	2.3%	0.71%
	Grocery & Merchandise Bags	1.0%	0.17%
	Trash Bags	1.6%	0.25%
	Commercial & Industrial Film	0.8%	0.42%
	Other Film	1.9%	0.23%
	Remainder/ Composite Plastic	1.2%	0.51%
Glass		**4.7%**	**0.84%**
	Glass Bottles and Jars - clear	2.7%	0.43%
	Glass Bottles and Jars - brown	1.5%	0.49%
	Glass Bottles and Jars - green	0.5%	0.23%
	Glass Bottles and Jars - blue	0.0%	0.06%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**10.0%**	**3.69%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.3%	0.41%
	Electronic Equipment	1.6%	0.88%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	8.1%	3.18%
Organics		**27.9%**	**3.52%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	4.2%	2.01%
	Yard Waste - Woody; branch >0.5"	0.1%	0.09%
	Food Scraps	17.2%	2.17%
	Bottom Fines and Dirt	1.0%	0.35%
	Diapers	3.8%	1.01%
	Other Organic	1.6%	0.65%
Metals		**3.5%**	**0.75%**
	Aluminum Beverage Containers	0.9%	0.23%
	Other Aluminum	0.4%	0.12%
	Ferrous containers (bi-metal cans)	1.0%	0.23%
	Aerosol cans	0.2%	0.08%
	Other Ferrous	0.8%	0.62%
	Other Non-Ferrous	0.0%	0.06%
	Other Metal	0.1%	0.23%
Textiles		**7.1%**	**1.35%**
	Carpet and carpet padding	1.3%	1.01%
	Clothing and other textiles	5.8%	1.09%
HHW		**0.5%**	**0.20%**
	Household Hazardous Waste materials	0.5%	0.21%
C&D		**11.3%**	**4.39%**
	Construction and Demolition materials	11.3%	4.66%
Total Percentage		100.0%	

5.3.6.3 Landfilled Metro ICI MSW

Figure 5-11 shows the percentage, by weight, of each of the ten material classes for the landfilled Metro ICI MSW subsector. Organics, Paper, and Plastics account for approximately 64% (26.4%, 22.9%, and 14.6%, respectively) of the landfilled MSW for this subsector.

Figure 5-11. Composition of Landfilled Metro ICI MSW by Material Class

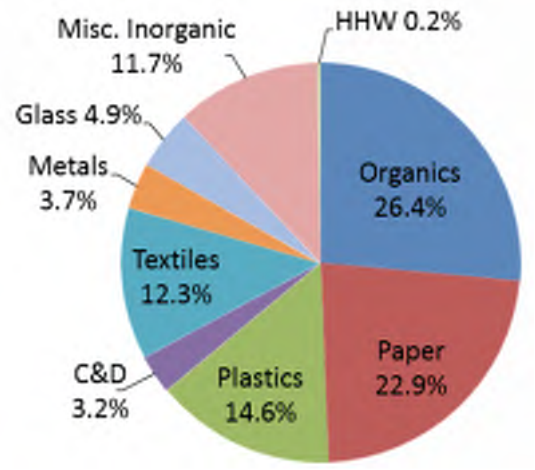


Table 5-23 lists the top ten material categories that were found in the landfilled Metro ICI MSW subsector. These ten categories account for approximately 75% of the landfilled Metro ICI MSW. Food Scraps, Clothing and other textiles, and Compostable Paper and 'other' paper material categories account for 43.9% (19.3%, 12.3%, and 12.2%, respectively) of landfilled Metro ICI MSW.

Table 5-23. Top Ten Individual Material Categories in Landfilled Metro ICI MSW

Category	Waste Composition %	Cum. %
Food Scraps	19.3%	19.3%
Clothing and other textiles	12.3%	31.6%
Compostable Paper and 'other' paper	12.2%	43.9%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	10.4%	54.2%
Diapers	5.5%	59.7%
Mixed Paper - Recyclable	3.7%	63.4%
Boxboard	3.2%	66.6%
Construction and Demolition materials	3.2%	69.8%
Glass Bottles and Jars - clear	3.0%	72.8%
#1 PET Bottles/Jars	2.6%	75.4%
Total	**75.4%**	

Table 5-24 provides the composition profile of the landfilled Metro ICI MSW sector.

Table 5-24. Composition Profile of Landfilled Metro ICI MSW

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**22.9%**	**8.86%**
	Newsprint	0.3%	0.15%
	High Grade Office Paper	0.5%	0.84%
	Magazines/Catalogs	1.3%	0.92%
	Uncoated OCC	1.6%	1.14%
	Kraft	0.0%	0.04%
	Boxboard	3.2%	1.44%
	Mixed Paper - Recyclable	3.7%	2.34%
	Compostable Paper and 'other' paper	12.2%	6.66%
	Milk and Juice cartons/boxes, coated	0.0%	0.00%
Plastics		**14.6%**	**4.12%**
	#1 PET Bottles/Jars	2.6%	1.35%
	#1 Other PET Containers & Packaging	0.1%	0.04%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.24%
	#2 HDPE Bottles/ Jars - Color	0.3%	0.15%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	1.9%	0.35%
	#3-#7 Other - All	2.1%	1.13%
	Other Rigid Plastic Products	0.9%	0.60%
	Grocery & Merchandise Bags	1.4%	0.70%
	Trash Bags	2.2%	0.75%
	Commercial & Industrial Film	0.4%	0.37%
	Other Film	1.8%	0.58%
	Remainder/ Composite Plastic	0.5%	0.31%
Glass		**4.9%**	**3.31%**
	Glass Bottles and Jars - clear	3.0%	3.24%
	Glass Bottles and Jars - brown	0.4%	0.88%
	Glass Bottles and Jars - green	1.4%	2.85%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**11.7%**	**10.25%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.04%
	Electronic Equipment	1.3%	2.21%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	10.4%	8.47%
Organics		**26.4%**	**4.55%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.00%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	19.3%	3.86%
	Bottom Fines and Dirt	1.4%	0.66%
	Diapers	5.5%	5.79%
	Other Organic	0.2%	0.29%
Metals		**3.7%**	**1.60%**
	Aluminum Beverage Containers	0.8%	0.57%
	Other Aluminum	0.6%	0.31%
	Ferrous containers (bi-metal cans)	0.8%	0.81%
	Aerosol cans	0.4%	0.47%
	Other Ferrous	1.2%	1.41%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.0%	0.00%
Textiles		**12.3%**	**12.54%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	12.3%	12.54%
HHW		**0.2%**	**0.39%**
	Household Hazardous Waste materials	0.2%	0.47%
C&D		**3.2%**	**2.77%**
	Construction and Demolition materials	3.2%	2.77%
Total Percentage		100.0%	

5.3.6.4 Landfilled Metro Residential/ICI MSW Composition

Figure 5-12 shows the percentage, by weight, of each of the ten material classes for the landfilled Metro residential/ICI MSW sector. Organics, Paper, and Plastics account for approximately 64% (26.9%, 21.8%, and 14.9%, respectively) of the landfilled MSW for this sector.

Figure 5-12. Composition of Landfilled Metro Residential/ICI MSW by Material Class

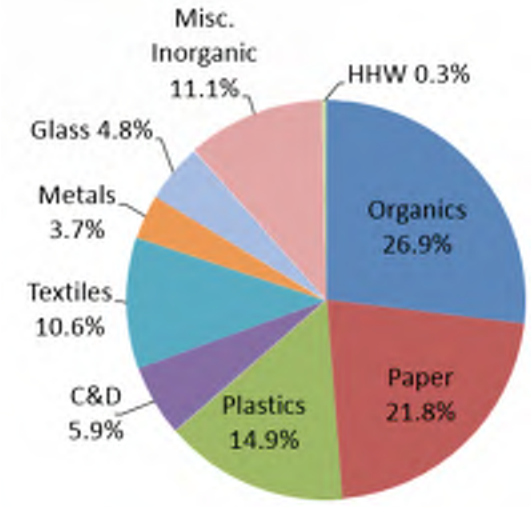


Table 5-25 lists the top ten material categories that were found in the landfilled Metro residential/ICI MSW sector. These ten categories account for approximately 72% of landfilled Metro MSW. Food Scraps, Compostable Paper and 'other' paper, and Clothing and other textiles material categories account for 39.7% (18.6%, 10.9%, and 10.1%, respectively) of landfilled Metro residential/ICI MSW.

Table 5-25. Top Ten Individual Material Categories in Landfilled Metro Residential/ICI MSW

Category	Waste Composition %	Cum. %
Food Scraps	18.6%	18.6%
Compostable Paper and 'other' paper	10.9%	29.6%
Clothing and other textiles	10.1%	39.7%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	9.6%	49.3%
Construction and Demolition materials	5.9%	55.2%
Diapers	4.9%	60.1%
Mixed Paper - Recyclable	3.5%	63.6%
Glass Bottles and Jars - clear	2.9%	66.5%
Boxboard	2.8%	69.3%
#1 PET Bottles/Jars	2.5%	71.8%
Total	**71.8%**	

Table 5-26 provides the composition profile of landfilled Metro residential/ICI MSW.

Table 5-26. Composition Profile of Landfilled Metro Residential/ICI MSW

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**21.8%**	**3.95%**
	Newsprint	0.5%	0.09%
	High Grade Office Paper	0.8%	0.38%
	Magazines/Catalogs	1.2%	0.41%
	Uncoated OCC	2.0%	0.51%
	Kraft	0.1%	0.02%
	Boxboard	2.8%	0.64%
	Mixed Paper - Recyclable	3.5%	1.04%
	Compostable Paper and 'other' paper	10.9%	2.97%
	Milk and Juice cartons/boxes, coated	0.0%	0.01%
Plastics		**14.9%**	**1.84%**
	#1 PET Bottles/Jars	2.5%	0.60%
	#1 Other PET Containers & Packaging	0.2%	0.02%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.11%
	#2 HDPE Bottles/ Jars - Color	0.4%	0.07%
	#2 Other HDPE Containers & Packaging	0.1%	0.02%
	#6 Expanded Polystyrene Packaging (EPS)	1.7%	0.16%
	#3-#7 Other - All	1.9%	0.50%
	Other Rigid Plastic Products	1.4%	0.28%
	Grocery & Merchandise Bags	1.3%	0.31%
	Trash Bags	2.0%	0.33%
	Commercial & Industrial Film	0.5%	0.17%
	Other Film	1.8%	0.26%
	Remainder/ Composite Plastic	0.8%	0.15%
Glass		**4.8%**	**1.47%**
	Glass Bottles and Jars - clear	2.9%	1.44%
	Glass Bottles and Jars - brown	0.8%	0.39%
	Glass Bottles and Jars - green	1.1%	1.27%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**11.1%**	**4.58%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.05%
	Electronic Equipment	1.4%	0.99%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	9.6%	3.78%
Organics		**26.9%**	**2.06%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	1.4%	0.22%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	18.6%	1.73%
	Bottom Fines and Dirt	1.3%	0.29%
	Diapers	4.9%	2.58%
	Other Organic	0.7%	0.15%
Metals		**3.7%**	**0.72%**
	Aluminum Beverage Containers	0.8%	0.25%
	Other Aluminum	0.5%	0.14%
	Ferrous containers (bi-metal cans)	0.9%	0.36%
	Aerosol cans	0.3%	0.21%
	Other Ferrous	1.0%	0.63%
	Other Non-Ferrous	0.0%	0.01%
	Other Metal	0.0%	0.03%
Textiles		**10.6%**	**5.58%**
	Carpet and carpet padding	0.4%	0.11%
	Clothing and other textiles	10.1%	5.58%
HHW		**0.3%**	**0.17%**
	Household Hazardous Waste materials	0.3%	0.21%
C&D		**5.9%**	**1.32%**
	Construction and Demolition materials	5.9%	1.34%
Total Percentage		100.0%	

5.3.7 Landfilled Non-Metro MSW Composition

In determining the landfilled non-Metro MSW composition for the residential and ICI sectors, the samples were split based on collection route. Out of 192 samples collected, a total of 143 (74%) samples were processed from the non-Metro haulers/haul routes, where 50 (35%) non-Metro samples were from the residential subsector and 93 (65%) non-Metro samples were from the ICI subsector. Refer to **Table 5-20** for details on the Metro and non-Metro MSW sample processing distribution.

5.3.7.1 Landfilled Non-Metro Residential MSW

Figure 5-13 shows the percentage, by weight, of each of the ten material classes for the landfilled non-Metro residential MSW subsector. Organics, Paper, and Plastics account for approximately 78% (35.6%, 26.7%, and 15.5%, respectively) of the total MSW for this sector.

Figure 5-13. Composition of Landfilled Non-Metro Residential MSW by Material Class

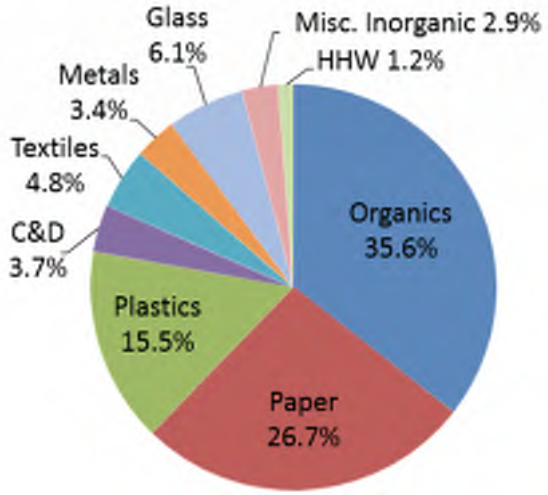


Table 5-27 lists the top ten material categories that were found in the landfilled non-Metro residential MSW subsector. These ten categories account for approximately 64% of the landfilled non-Metro residential MSW. Food Scraps, Compostable Paper and 'other' paper, and Other Organic material categories account for 38.9% (24.1%, 10.1%, and 4.7%, respectively) of the landfilled non-Metro residential MSW.

Table 5-27. Top Ten Individual Material Categories in Landfilled Non-Metro Residential MSW

Category	Waste Composition %	Cum. %
Food Scraps	24.1%	24.1%
Compostable Paper and 'other' paper	10.1%	34.2%
Other Organic	4.7%	38.9%
Clothing and other textiles	4.4%	43.3%
Uncoated OCC	4.2%	47.6%
Construction and Demolition materials	3.7%	51.3%
Diapers	3.6%	54.9%
Glass Bottles and Jars - clear	3.3%	58.2%
Boxboard	3.2%	61.4%
Mixed Paper - Recyclable	3.0%	64.4%
Total	**64.4%**	

Table 5-28 provides the composition profile of landfilled non-Metro residential MSW.

Table 5-28. Composition Profile of Landfilled Non-Metro Residential MSW Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**26.7%**	**2.00%**
	Newsprint	1.9%	0.45%
	High Grade Office Paper	1.1%	0.42%
	Magazines/Catalogs	2.4%	0.59%
	Uncoated OCC	4.2%	1.01%
	Kraft	0.5%	0.18%
	Boxboard	3.2%	0.37%
	Mixed Paper - Recyclable	3.0%	0.45%
	Compostable Paper and 'other' paper	10.1%	0.70%
	Milk and Juice cartons/boxes, coated	0.2%	0.05%
Plastics		**15.5%**	**1.01%**
	#1 PET Bottles/Jars	2.3%	0.20%
	#1 Other PET Containers & Packaging	0.4%	0.06%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.08%
	#2 HDPE Bottles/ Jars - Color	0.7%	0.13%
	#2 Other HDPE Containers & Packaging	0.0%	0.03%
	#6 Expanded Polystyrene Packaging (EPS)	1.1%	0.12%
	#3-#7 Other - All	2.0%	0.19%
	Other Rigid Plastic Products	1.1%	0.35%
	Grocery & Merchandise Bags	1.2%	0.13%
	Trash Bags	1.8%	0.25%
	Commercial & Industrial Film	0.1%	0.09%
	Other Film	2.8%	0.21%
	Remainder/ Composite Plastic	1.6%	0.34%
Glass		**6.1%**	**0.82%**
	Glass Bottles and Jars - clear	3.3%	0.49%
	Glass Bottles and Jars - brown	1.5%	0.35%
	Glass Bottles and Jars - green	1.2%	0.31%
	Glass Bottles and Jars - blue	0.0%	0.06%
	Flat Glass	0.0%	0.01%
	Other Glass	0.1%	0.05%

		Mean	+/-
Misc. Inorganic		**2.9%**	**1.11%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.20%
	Electronic Equipment	0.5%	0.23%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	2.3%	1.14%
Organics		**35.6%**	**2.72%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.2%	1.08%
	Yard Waste - Woody; branch >0.5"	0.1%	0.10%
	Food Scraps	24.1%	2.08%
	Bottom Fines and Dirt	0.9%	0.79%
	Diapers	3.6%	0.72%
	Other Organic	4.7%	1.29%
Metals		**3.4%**	**0.43%**
	Aluminum Beverage Containers	0.8%	0.12%
	Other Aluminum	0.3%	0.06%
	Ferrous containers (bi-metal cans)	1.3%	0.18%
	Aerosol cans	0.2%	0.07%
	Other Ferrous	0.4%	0.28%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.4%	0.28%
Textiles		**4.8%**	**1.25%**
	Carpet and carpet padding	0.4%	0.90%
	Clothing and other textiles	4.4%	1.11%
HHW		**1.2%**	**0.50%**
	Household Hazardous Waste materials	1.2%	0.53%
C&D		**3.7%**	**2.34%**
	Construction and Demolition materials	3.7%	2.67%
Total Percentage		100.0%	

5.3.7.2 Landfilled Non-Metro ICI MSW

Figure 5-14 shows the percentage, by weight, of each of the ten material classes for the landfilled non-Metro ICI MSW subsector. Paper, Organics, and Plastics account for over 63% (28.0%, 18.3%, and 16.9%, respectively) of the landfilled MSW for this subsector.

Figure 5-14. Composition of Landfilled Non-Metro ICI MSW by Material Class

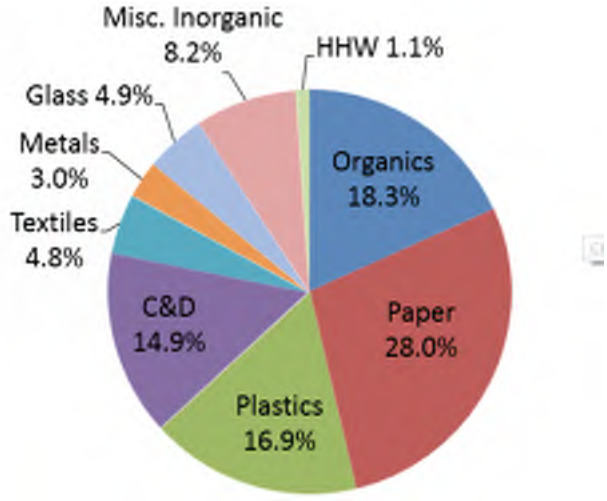


Table 5-29 lists the top ten material categories that were found in the landfilled non-Metro ICI MSW subsector. These ten categories account for approximately 69% of landfilled non-Metro ICI MSW. Construction and Demolition materials, Food Scraps, and Uncoated OCC material categories account for 37.7% (14.9%, 12.5%, and 10.3%, respectively) of landfilled non-Metro ICI MSW.

Table 5-29. Top Ten Individual Material Categories in Landfilled Non-Metro ICI MSW

Category	Waste Composition %	Cum. %
Construction and Demolition materials	14.9%	14.9%
Food Scraps	12.5%	27.4%
Uncoated OCC	10.3%	37.7%
Compostable Paper and 'other' paper	9.3%	47.0%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.5%	53.5%
Clothing and other textiles	4.4%	57.9%
Boxboard	3.6%	61.5%
Trash Bags	2.4%	63.9%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.3%	66.2%
Other Film	2.3%	68.6%
Total	**68.6%**	

Table 5-30 provides the composition profile of landfilled non-Metro ICI MSW.

Table 5-30. Composition Profile of Landfilled Non-Metro ICI MSW

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**28.0%**	**2.96%**
	Newsprint	0.5%	0.20%
	High Grade Office Paper	1.1%	0.47%
	Magazines/Catalogs	0.8%	0.24%
	Uncoated OCC	10.3%	1.50%
	Kraft	0.7%	0.48%
	Boxboard	3.6%	1.67%
	Mixed Paper - Recyclable	1.6%	0.35%
	Compostable Paper and 'other' paper	9.3%	2.17%
	Milk and Juice cartons/boxes, coated	0.1%	0.03%
Plastics		**16.9%**	**2.18%**
	#1 PET Bottles/Jars	1.4%	0.20%
	#1 Other PET Containers & Packaging	0.3%	0.10%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.29%
	#2 HDPE Bottles/ Jars - Color	0.8%	0.58%
	#2 Other HDPE Containers & Packaging	0.1%	0.06%
	#6 Expanded Polystyrene Packaging (EPS)	1.1%	0.40%
	#3-#7 Other - All	1.2%	0.20%
	Other Rigid Plastic Products	1.9%	0.65%
	Grocery & Merchandise Bags	0.7%	0.13%
	Trash Bags	2.4%	1.25%
	Commercial & Industrial Film	2.3%	1.08%
	Other Film	2.3%	0.34%
	Remainder/ Composite Plastic	2.1%	0.93%
Glass		**4.9%**	**1.78%**
	Glass Bottles and Jars - clear	1.7%	0.40%
	Glass Bottles and Jars - brown	0.9%	0.34%
	Glass Bottles and Jars - green	1.1%	0.79%
	Glass Bottles and Jars - blue	0.1%	0.08%
	Flat Glass	1.0%	1.98%
	Other Glass	0.0%	0.04%

		Mean	+/-
Misc. Inorganic		**8.2%**	**2.60%**
	Televisions	0.7%	0.85%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.2%	0.16%
	Electronic Equipment	0.8%	0.38%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.5%	2.70%
Organics		**18.3%**	**2.89%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.3%	1.44%
	Yard Waste - Woody; branch >0.5"	0.0%	0.02%
	Food Scraps	12.5%	2.32%
	Bottom Fines and Dirt	1.1%	0.66%
	Diapers	1.4%	0.47%
	Other Organic	0.9%	0.32%
Metals		**3.0%**	**0.58%**
	Aluminum Beverage Containers	0.6%	0.11%
	Other Aluminum	0.2%	0.09%
	Ferrous containers (bi-metal cans)	0.5%	0.18%
	Aerosol cans	0.1%	0.03%
	Other Ferrous	1.1%	0.48%
	Other Non-Ferrous	0.1%	0.10%
	Other Metal	0.4%	0.27%
Textiles		**4.8%**	**1.50%**
	Carpet and carpet padding	0.4%	0.50%
	Clothing and other textiles	4.4%	1.51%
HHW		**1.1%**	**0.56%**
	Household Hazardous Waste materials	1.1%	0.64%
C&D		**14.9%**	**3.81%**
	Construction and Demolition materials	14.9%	3.88%
Total Percentage		100.0%	

5.3.7.4 Landfilled Non-Metro Residential/ICI MSW Composition

Figure 5-15 shows the percentage, by weight, of each of the ten material classes for the landfilled non-Metro residential/ICI MSW sector. Paper, Organics, and Plastics account for approximately 68% (27.6%, 24.0%, and 16. 5%, respectively) of the landfilled MSW for this sector.

Figure 5-15. Composition of Landfilled Non-Metro Residential/ICI MSW by Material Class

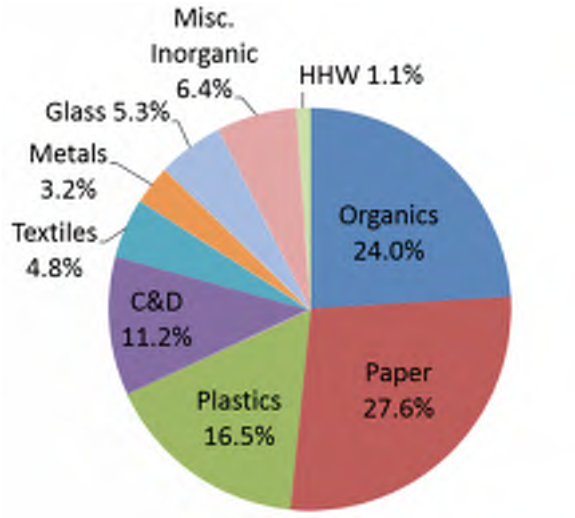


Table 5-31 lists the top ten material categories that were found in the landfilled non-Metro residential/ICI MSW sector. These ten categories account for approximately 65% of landfilled non-Metro residential/ICI MSW. Food Scraps, Construction and Demolition materials, and Compostable Paper and 'other' paper material categories account for 37.1% (16.4%, 11.2%, and 9.6%, respectively) of landfilled non-Metro residential/ICI MSW.

Table 5-31. Top Ten Individual Material Categories in Landfilled Non-Metro Residential/ICI MSW

Category	Waste Composition %	Cum. %
Food Scraps	16.4%	16.4%
Construction and Demolition materials	11.2%	27.6%
Compostable Paper and 'other' paper	9.6%	37.1%
Uncoated OCC	8.3%	45.4%
Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.1%	50.5%
Clothing and other textiles	4.4%	54.9%
Boxboard	3.4%	58.3%
Other Film	2.5%	60.8%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.3%	63.1%
Glass Bottles and Jars - clear	2.2%	65.3%
Total	**65.3%**	

Table 5-32 provides the composition profile of landfilled non-Metro residential/ICI MSW.

Table 5-32. Composition Profile of Landfilled Non-Metro Residential/ICI MSW

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**27.6%**	**1.34%**
	Newsprint	1.0%	0.10%
	High Grade Office Paper	1.1%	0.21%
	Magazines/Catalogs	1.3%	0.12%
	Uncoated OCC	8.3%	0.68%
	Kraft	0.7%	0.21%
	Boxboard	3.4%	0.75%
	Mixed Paper - Recyclable	2.1%	0.17%
	Compostable Paper and 'other' paper	9.6%	0.97%
	Milk and Juice cartons/boxes, coated	0.1%	0.01%
Plastics		**16.5%**	**0.98%**
	#1 PET Bottles/Jars	1.7%	0.09%
	#1 Other PET Containers & Packaging	0.3%	0.05%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.13%
	#2 HDPE Bottles/ Jars - Color	0.8%	0.26%
	#2 Other HDPE Containers & Packaging	0.0%	0.03%
	#6 Expanded Polystyrene Packaging (EPS)	1.1%	0.18%
	#3-#7 Other - All	1.5%	0.09%
	Other Rigid Plastic Products	1.6%	0.29%
	Grocery & Merchandise Bags	0.8%	0.06%
	Trash Bags	2.2%	0.56%
	Commercial & Industrial Film	1.5%	0.48%
	Other Film	2.5%	0.15%
	Remainder/ Composite Plastic	2.0%	0.41%
Glass		**5.3%**	**0.80%**
	Glass Bottles and Jars - clear	2.2%	0.19%
	Glass Bottles and Jars - brown	1.1%	0.16%
	Glass Bottles and Jars - green	1.2%	0.35%
	Glass Bottles and Jars - blue	0.1%	0.04%
	Flat Glass	0.7%	0.88%
	Other Glass	0.0%	0.02%

		Mean	+/-
Misc. Inorganic		**6.4%**	**1.16%**
	Televisions	0.5%	0.38%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.08%
	Electronic Equipment	0.7%	0.17%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	5.1%	1.21%
Organics		**24.0%**	**1.32%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.3%	0.65%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	16.4%	1.06%
	Bottom Fines and Dirt	1.0%	0.31%
	Diapers	2.2%	0.22%
	Other Organic	2.2%	0.20%
Metals		**3.2%**	**0.26%**
	Aluminum Beverage Containers	0.7%	0.05%
	Other Aluminum	0.2%	0.04%
	Ferrous containers (bi-metal cans)	0.7%	0.08%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	0.9%	0.21%
	Other Non-Ferrous	0.1%	0.04%
	Other Metal	0.4%	0.13%
Textiles		**4.8%**	**0.68%**
	Carpet and carpet padding	0.4%	0.24%
	Clothing and other textiles	4.4%	0.68%
HHW		**1.1%**	**0.26%**
	Household Hazardous Waste materials	1.1%	0.29%
C&D		**11.2%**	**1.72%**
	Construction and Demolition materials	11.2%	1.75%
Total Percentage		100.0%	

Section 6

Recovered Materials Characterization Summer and Fall Sampling Combined

6.1 Objective

Sections 2 and 4 summarized the summer sampling event results and fall sampling event results. The following section develops the recovery estimates by waste sectors, geographic areas, estimate county level composition profiles, and estimate diversity for the Metro Nashville and Davidson County Waste Stream Characterization Study. All of the results in this section were generated from waste samples taken at the Republic Transfer Station and Waste Management Transfer Station.

6.2 Summary of Study

A total of 93 recovered materials samples were hand-sorted and characterized. The overall goal of the two-season study for sample distribution between Metro trucks and private trucks is 75% Metro and 25% privates for the MRF sorts and the sampling split would be approximately 50/50 between residential and ICI sectors. **Table 6-1** summarizes the summer and fall samples combined that were used to determine the recovered materials composition. Of the 93 samples processed, 40 (43%) were samples of commercial waste (ICI), and 53 (57%) were samples of residential waste; 81% were samples from USD areas and 19% were samples from GSD areas; and 53% of the samples were from Metro routes and 47% were from private routes.

Table 6-1. Number of Recovered Samples by Waste Sector

Sampling Group	Sample Count		Total Sample Wt.
	No.	%	(pounds)
Residential	53	57%	12,245
USD	*42*	*79.2%*	*9,751*
GSD	*11*	*20.8%*	*2,493*
ICI	40	43%	9,630
USD	*33*	*82.5%*	*7,958*
GSD	*7*	*17.5%*	*1,672*
Total Res/ICI	**93**	**100%**	**21,874**

6.3 Recovered Materials Characterization Results

In the following sections, the recovered materials composition results are presented for the ICI and residential waste sectors. The combined residential/ICI composition was determined by weighting the ICI and residential sampling results by using the ratio of 73% residential to 27% ICI recovered materials determined by the gatehouse surveys.

Each composition profile is presented as follows:

- A pie chart depicting the nine material classes by weight (i.e., Paper, Plastic, Organics, Textiles, Glass, C&D, Metal, Inorganics, and HHW);
- A list of the ten largest material categories by weight (e.g., Food Scraps, High Grade Office Paper, Televisions, etc.), where waste composition percentages are rounded to the nearest tenth and cumulative totals represent the sum of unrounded results;
- A comprehensive table detailing the full composition results for the entire 50 material categories.

6.3.1 Recovered Residential Materials Composition

Figure 6-1 shows the percentage, by weight, of each of the nine material classes for the recovered residential materials sector. Paper, Plastics, and Metals account for approximately 91% (74.5%, 12.5%, and 4.2%, respectively) of the recovered residential materials for this sector.

Figure 6-1. Composition of Recovered Residential Materials by Material Class

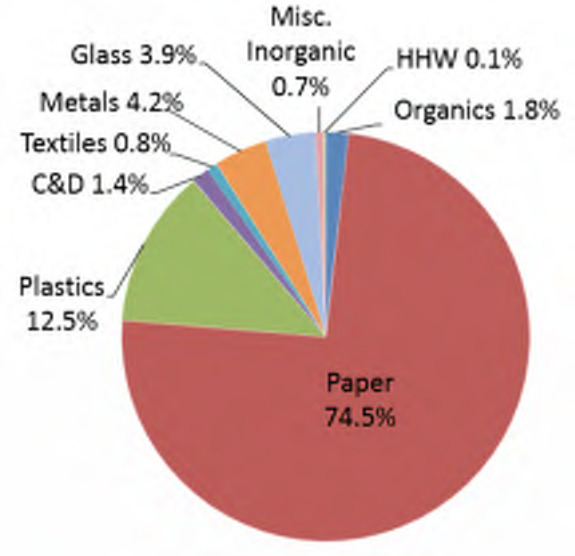


Table 6-2 lists the top ten material categories that were found in the recovered residential materials sector. These ten categories account for approximately 80% of recovered residential materials. Uncoated OCC, Magazines/Catalogs, and Newsprint material categories account for 48.8% (26.1%, 11.9%, and 10.8%, respectively) of recovered residential materials.

Table 6-2. Top Ten Individual Material Categories in Recovered Residential Materials

Category	Waste Composition %	Cum. %
Uncoated OCC	26.1%	26.1%
Magazines/Catalogs	11.9%	38.1%
Newsprint	10.8%	48.8%
Boxboard	8.3%	57.1%
Mixed Paper - Recyclable	6.4%	63.5%
High Grade Office Paper	5.4%	68.9%
#1 PET Bottles/Jars	3.8%	72.8%
Compostable Paper and 'other' paper	3.2%	76.0%
Kraft	1.9%	77.9%
Aluminum Beverage Containers	1.6%	79.5%
Total	**79.5%**	

Table 6-3 provides a composition profile of recovered residential materials.

Table 6-3. Composition Profile of Recovered Residential Materials

Summer+Fall_Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**74.5%**	**4.90%**
	Newsprint	10.8%	2.19%
	High Grade Office Paper	5.4%	2.97%
	Magazines/Catalogs	11.9%	2.04%
	Uncoated OCC	26.1%	2.99%
	Kraft	1.9%	0.31%
	Boxboard	8.3%	0.85%
	Mixed Paper - Recyclable	6.4%	0.82%
	Compostable Paper and 'other' paper	3.2%	0.45%
	Milk and Juice cartons/boxes, coated	0.4%	0.07%
Plastics		**12.5%**	**1.10%**
	#1 PET Bottles/Jars	3.8%	0.45%
	#1 Other PET Containers & Packaging	0.8%	0.14%
	#2 HDPE Bottles/Jars - Clear	1.0%	0.16%
	#2 HDPE Bottles/ Jars - Color	1.2%	0.20%
	#2 Other HDPE Containers & Packaging	0.1%	0.04%
	#6 Expanded Polystyrene Packaging (EPS)	0.4%	0.10%
	#3-#7 Other - All	1.4%	0.18%
	Other Rigid Plastic Products	0.8%	0.18%
	Grocery & Merchandise Bags	0.4%	0.06%
	Trash Bags	0.4%	0.09%
	Commercial & Industrial Film	0.0%	0.02%
	Other Film	1.5%	0.27%
	Remainder/ Composite Plastic	0.7%	0.26%
Glass		**3.9%**	**1.37%**
	Glass Bottles and Jars - clear	1.6%	0.39%
	Glass Bottles and Jars - brown	1.6%	0.89%
	Glass Bottles and Jars - green	0.6%	0.24%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.1%	0.15%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**0.7%**	**0.39%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.2%	0.11%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.5%	0.32%
Organics		**1.8%**	**0.49%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1%	0.20%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	1.0%	0.40%
	Bottom Fines and Dirt	0.3%	0.09%
	Diapers	0.1%	0.09%
	Other Organic	0.2%	0.09%
Metals		**4.2%**	**0.55%**
	Aluminum Beverage Containers	1.6%	0.23%
	Other Aluminum	0.2%	0.08%
	Ferrous containers (bi-metal cans)	1.5%	0.21%
	Aerosol cans	0.1%	0.03%
	Other Ferrous	0.6%	0.32%
	Other Non-Ferrous	0.1%	0.04%
	Other Metal	0.2%	0.11%
Textiles		**0.8%**	**0.64%**
	Carpet and carpet padding	0.0%	0.01%
	Clothing and other textiles	0.8%	0.64%
HHW		**0.1%**	**0.07%**
	Household Hazardous Waste materials	0.1%	0.07%
C&D		**1.4%**	**0.96%**
	Construction and Demolition materials	1.4%	0.96%
Total Percentage		100.0%	

6.3.2 Recovered ICI Materials Composition

Figure 6-2 shows the percentage, by weight, of each of the nine material classes for the recovered ICI materials sector. Paper, Plastics, and Organics account for approximately 95% (87.4%, 5.4%, and 2.6%, respectively) of the recovered ICI materials for this sector.

Figure 6-2. Composition of Recovered ICI Materials by Material Class

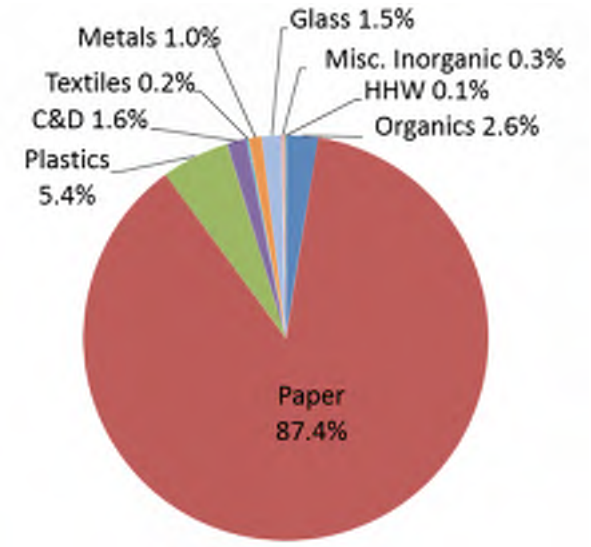


Table 6-4 lists the top ten material categories that were found in the recovered ICI materials sector. These ten categories account for approximately 92% of recovered ICI materials. Uncoated OCC, Boxboard, and High Grade Office Paper material categories account for 79.2% (68.2%, 6.1%, and 4.9%, respectively) of recovered ICI materials.

Table 6-4. Top Ten Individual Material Categories in Recovered ICI Materials

Category	Waste Composition %	Cum. %
Uncoated OCC	68.2%	68.2%
Boxboard	6.1%	74.3%
High Grade Office Paper	4.9%	79.2%
Magazines/Catalogs	3.8%	83.0%
Food Scraps	2.1%	85.1%
Compostable Paper and 'other' paper	1.6%	86.7%
Construction and Demolition materials	1.6%	88.2%
Other Film	1.4%	89.6%
Mixed Paper - Recyclable	1.2%	90.8%
Glass Bottles and Jars - clear	1.1%	91.9%
Total	**91.9%**	

Table 6-5 provides the composition profile of the recovered ICI materials sector.

Table 6-5. Composition Profile of Recovered ICI Materials

Summer+Fall_Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**87.4%**	**5.14%**
	Newsprint	0.5%	0.26%
	High Grade Office Paper	4.9%	3.45%
	Magazines/Catalogs	3.8%	4.74%
	Uncoated OCC	68.2%	6.89%
	Kraft	0.9%	0.45%
	Boxboard	6.1%	2.63%
	Mixed Paper - Recyclable	1.2%	0.61%
	Compostable Paper and 'other' paper	1.6%	0.46%
	Milk and Juice cartons/boxes, coated	0.1%	0.05%
Plastics		**5.4%**	**1.69%**
	#1 PET Bottles/Jars	0.6%	0.25%
	#1 Other PET Containers & Packaging	0.1%	0.04%
	#2 HDPE Bottles/Jars - Clear	0.2%	0.06%
	#2 HDPE Bottles/ Jars - Color	0.2%	0.08%
	#2 Other HDPE Containers & Packaging	0.0%	0.01%
	#6 Expanded Polystyrene Packaging (EPS)	0.2%	0.13%
	#3-#7 Other - All	0.4%	0.23%
	Other Rigid Plastic Products	0.8%	0.38%
	Grocery & Merchandise Bags	0.1%	0.04%
	Trash Bags	0.4%	0.19%
	Commercial & Industrial Film	0.6%	0.37%
	Other Film	1.4%	1.18%
	Remainder/ Composite Plastic	0.4%	0.22%
Glass		**1.5%**	**1.04%**
	Glass Bottles and Jars - clear	1.1%	0.97%
	Glass Bottles and Jars - brown	0.2%	0.16%
	Glass Bottles and Jars - green	0.2%	0.16%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.02%

		Mean	+/-
Misc. Inorganic		**0.3%**	**0.23%**
	Televisions	0.0%	0.01%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.02%
	Electronic Equipment	0.1%	0.16%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.1%	0.16%
Organics		**2.6%**	**1.62%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1%	0.10%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	2.1%	1.26%
	Bottom Fines and Dirt	0.1%	0.05%
	Diapers	0.3%	0.35%
	Other Organic	0.0%	0.01%
Metals		**1.0%**	**0.40%**
	Aluminum Beverage Containers	0.5%	0.35%
	Other Aluminum	0.0%	0.03%
	Ferrous containers (bi-metal cans)	0.2%	0.07%
	Aerosol cans	0.0%	0.01%
	Other Ferrous	0.2%	0.13%
	Other Non-Ferrous	0.1%	0.08%
	Other Metal	0.0%	0.02%
Textiles		**0.2%**	**0.13%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.2%	0.13%
HHW		**0.1%**	**0.06%**
	Household Hazardous Waste materials	0.1%	0.06%
C&D		**1.6%**	**1.54%**
	Construction and Demolition materials	1.6%	1.54%
Total Percentage		100.0%	

6.3.3 Recovered Residential/ICI Materials Composition

Figure 6-3 shows the percentage, by weight, of each of the nine material classes for the combined recovered residential and ICI materials sectors. Paper, Plastics, and Metals account for approximately 92% (78.0%, 10.5%, and 3.3%, respectively) of the recovered combined residential/ICI materials.

Figure 6-3. Composition of Recovered Residential/ICI Materials by Material Class

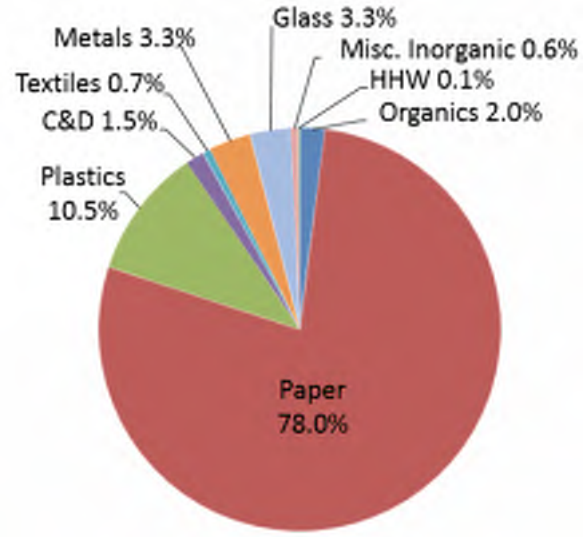


Table 6-6 lists the top ten material categories that were found in the recovered combined residential/ICI materials. These ten categories account for approximately 82% of recovered combined residential/ICI materials. Uncoated OCC, Magazines/Catalogs, and Newsprint material categories account for 55.3% (37.6%, 9.7%, and 8%, respectively) of recovered combined residential/ICI materials.

Table 6-6. Top Ten Individual Material Categories in Recovered Residential/ICI Materials

Category	Waste Composition %	Cum. %
Uncoated OCC	37.6%	37.6%
Magazines/Catalogs	9.7%	47.3%
Newsprint	8.0%	55.3%
Boxboard	7.7%	63.0%
High Grade Office Paper	5.3%	68.3%
Mixed Paper - Recyclable	5.0%	73.3%
#1 PET Bottles/Jars	3.0%	76.2%
Compostable Paper and 'other' paper	2.8%	79.0%
Kraft	1.6%	80.6%
Construction and Demolition materials	1.5%	82.1%
Total	**82.1%**	

Table 6-7 provides the composition profile of the recovered combined residential/ICI materials.

Table 6-7. Composition Profile of Recovered Residential/ICI Materials

Summer+Fall_Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**78.0%**	**2.62%**
	Newsprint	8.0%	1.16%
	High Grade Office Paper	5.3%	1.59%
	Magazines/Catalogs	9.7%	1.13%
	Uncoated OCC	37.6%	1.66%
	Kraft	1.6%	0.17%
	Boxboard	7.7%	0.49%
	Mixed Paper - Recyclable	5.0%	0.44%
	Compostable Paper and 'other' paper	2.8%	0.24%
	Milk and Juice cartons/boxes, coated	0.4%	0.04%
Plastics		**10.5%**	**0.60%**
	#1 PET Bottles/Jars	3.0%	0.24%
	#1 Other PET Containers & Packaging	0.6%	0.07%
	#2 HDPE Bottles/Jars - Clear	0.7%	0.08%
	#2 HDPE Bottles/ Jars - Color	0.9%	0.10%
	#2 Other HDPE Containers & Packaging	0.1%	0.02%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.06%
	#3-#7 Other - All	1.1%	0.10%
	Other Rigid Plastic Products	0.8%	0.10%
	Grocery & Merchandise Bags	0.3%	0.03%
	Trash Bags	0.4%	0.05%
	Commercial & Industrial Film	0.2%	0.03%
	Other Film	1.5%	0.17%
	Remainder/ Composite Plastic	0.6%	0.14%
Glass		**3.3%**	**0.73%**
	Glass Bottles and Jars - clear	1.4%	0.22%
	Glass Bottles and Jars - brown	1.2%	0.47%
	Glass Bottles and Jars - green	0.5%	0.13%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.1%	0.08%
	Other Glass	0.0%	0.01%

		Mean	+/-
Misc. Inorganic		**0.6%**	**0.21%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.1%	0.06%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.4%	0.17%
Organics		**2.0%**	**0.28%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1%	0.10%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	1.3%	0.23%
	Bottom Fines and Dirt	0.3%	0.05%
	Diapers	0.2%	0.05%
	Other Organic	0.1%	0.05%
Metals		**3.3%**	**0.29%**
	Aluminum Beverage Containers	1.3%	0.12%
	Other Aluminum	0.1%	0.04%
	Ferrous containers (bi-metal cans)	1.2%	0.11%
	Aerosol cans	0.1%	0.01%
	Other Ferrous	0.4%	0.17%
	Other Non-Ferrous	0.1%	0.02%
	Other Metal	0.1%	0.06%
Textiles		**0.7%**	**0.34%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.7%	0.34%
HHW		**0.1%**	**0.04%**
	Household Hazardous Waste materials	0.1%	0.04%
C&D		**1.5%**	**0.52%**
	Construction and Demolition materials	1.5%	0.52%
Total Percentage		100.0%	

6.3.4 Recovered USD MSW Composition

In determining the recovered USD MSW composition for residential and ICI MSW sectors, the samples were identified based on collection route within the USD. Out of 93 samples, a total of 75 (81%) of the samples were collected from the USD MSW sector. 42 (56%) USD samples were collected from residential MSW and 33 (44%) USD samples were collected from ICI MSW.

6.3.4.1 Recovered USD Residential MSW

Figure 6-4 shows the percentage, by weight, of each of the ten material classes for the recovered USD residential MSW subsector. Paper, Plastics, and Metals account for approximately 91% (75.0%, 11.5%, and 4.3%, respectively) of the recovered MSW for this sector.

Figure 6-4. Composition of Recovered USD Residential MSW by Material Class

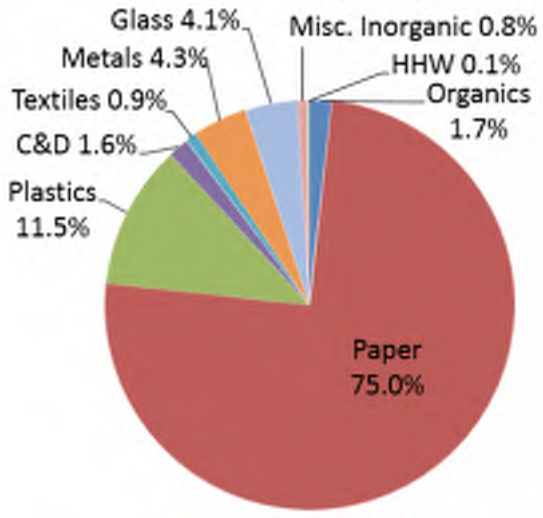


Table 6-8 lists the top ten material categories that were found in the recovered USD residential MSW subsector. These ten categories account for approximately 80% of recovered USD residential MSW. Uncoated OCC, Magazines/Catalogs, and Newsprint material categories account for 49.4% (26.4%, 12.7%, and 10.3%, respectively) of recovered USD residential MSW.

Table 6-8. Top Ten Individual Material Categories in Recovered USD Residential MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	26.4%	26.4%
Magazines/Catalogs	12.7%	39.1%
Newsprint	10.3%	49.4%
Boxboard	8.2%	57.6%
Mixed Paper - Recyclable	5.9%	63.6%
High Grade Office Paper	5.8%	69.4%
#1 PET Bottles/Jars	3.5%	72.8%
Compostable Paper and 'other' paper	3.2%	76.1%
Kraft	2.0%	78.0%
Aluminum Beverage Containers	1.7%	79.7%
Total	**79.7%**	

Table 6-9 provides the composition profile of recovered USD residential MSW.

Table 6-9. Composition Profile of Recovered Urban Residential Materials Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**75.0%**	**5.81%**
	Newsprint	10.3%	2.34%
	High Grade Office Paper	5.8%	3.72%
	Magazines/Catalogs	12.7%	2.43%
	Uncoated OCC	26.4%	3.45%
	Kraft	2.0%	0.36%
	Boxboard	8.2%	0.93%
	Mixed Paper - Recyclable	5.9%	0.91%
	Compostable Paper and 'other' paper	3.2%	0.50%
	Milk and Juice cartons/boxes, coated	0.4%	0.08%
Plastics		**11.5%**	**1.07%**
	#1 PET Bottles/Jars	3.5%	0.43%
	#1 Other PET Containers & Packaging	0.7%	0.13%
	#2 HDPE Bottles/Jars - Clear	0.8%	0.14%
	#2 HDPE Bottles/ Jars - Color	1.1%	0.20%
	#2 Other HDPE Containers & Packaging	0.1%	0.04%
	#6 Expanded Polystyrene Packaging (EPS)	0.4%	0.13%
	#3-#7 Other - All	1.3%	0.19%
	Other Rigid Plastic Products	0.8%	0.19%
	Grocery & Merchandise Bags	0.3%	0.07%
	Trash Bags	0.4%	0.10%
	Commercial & Industrial Film	0.0%	0.03%
	Other Film	1.3%	0.25%
	Remainder/ Composite Plastic	0.7%	0.24%
Glass		**4.1%**	**1.70%**
	Glass Bottles and Jars - clear	1.6%	0.47%
	Glass Bottles and Jars - brown	1.7%	1.11%
	Glass Bottles and Jars - green	0.7%	0.29%
	Glass Bottles and Jars - blue	0.0%	0.02%
	Flat Glass	0.1%	0.18%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**0.8%**	**0.48%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.2%	0.14%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.6%	0.39%
Organics		**1.7%**	**0.54%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.01%
	Yard Waste - Woody; branch >0.5"	0.0%	0.02%
	Food Scraps	1.1%	0.48%
	Bottom Fines and Dirt	0.3%	0.11%
	Diapers	0.1%	0.04%
	Other Organic	0.2%	0.11%
Metals		**4.3%**	**0.65%**
	Aluminum Beverage Containers	1.7%	0.24%
	Other Aluminum	0.1%	0.06%
	Ferrous containers (bi-metal cans)	1.5%	0.24%
	Aerosol cans	0.1%	0.03%
	Other Ferrous	0.6%	0.39%
	Other Non-Ferrous	0.0%	0.04%
	Other Metal	0.2%	0.13%
Textiles		**0.9%**	**0.80%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.9%	0.80%
HHW		**0.1%**	**0.08%**
	Household Hazardous Waste materials	0.1%	0.08%
C&D		**1.6%**	**1.19%**
	Construction and Demolition materials	1.6%	1.19%
Total Percentage		100.0%	

6.3.4.2 Recovered USD ICI MSW

Figure 6-5 shows the percentage, by weight, of each of the ten material classes for the recovered USD ICI MSW subsector. Paper, Plastics, and Organics account for approximately 96% (88.5%, 5.4%, and 2.1%, respectively) of the recovered MSW for this subsector.

Figure 6-5. Composition of Recovered USD ICI MSW by Material Class

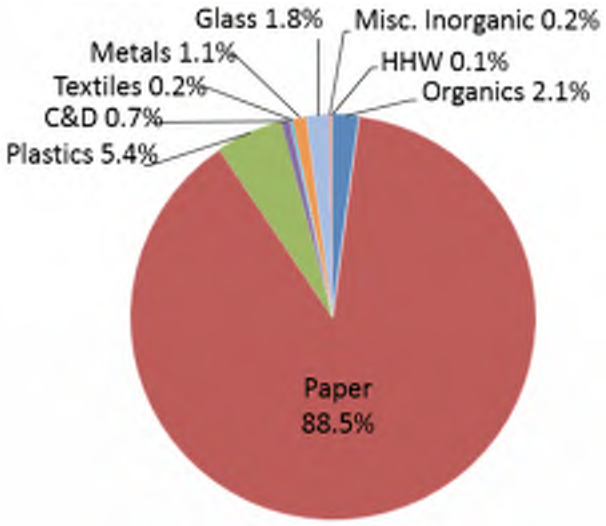


Table 6-10 lists the top ten material categories that were found in the recovered USD ICI MSW subsector. These ten categories account for approximately 92% of the recovered USD ICI MSW. Uncoated OCC, Boxboard, and High Grade Office Paper material categories account for 80% (67.4%, 6.9%, and 5.7%, respectively) of recovered USD ICI MSW.

Table 6-10. Top Ten Individual Material Categories in Recovered USD ICI MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	67.4%	67.4%
Boxboard	6.9%	74.3%
High Grade Office Paper	5.7%	80.0%
Magazines/Catalogs	4.4%	84.4%
Food Scraps	1.8%	86.2%
Other Film	1.5%	87.7%
Compostable Paper and 'other' paper	1.5%	89.2%
Glass Bottles and Jars - clear	1.2%	90.5%
Mixed Paper - Recyclable	1.0%	91.5%
Kraft	0.9%	92.4%
Total	**92.4%**	

Table 6-11 provides the composition profile of the recovered USD ICI MSW sector.

Table 6-11. Composition Profile of Recovered Urban ICI Materials

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**88.5%**	**5.71%**
	Newsprint	0.6%	0.31%
	High Grade Office Paper	5.7%	4.14%
	Magazines/Catalogs	4.4%	5.73%
	Uncoated OCC	67.4%	8.04%
	Kraft	0.9%	0.52%
	Boxboard	6.9%	3.16%
	Mixed Paper - Recyclable	1.0%	0.53%
	Compostable Paper and 'other' paper	1.5%	0.49%
	Milk and Juice cartons/boxes, coated	0.1%	0.05%
Plastics		**5.4%**	**1.92%**
	#1 PET Bottles/Jars	0.6%	0.29%
	#1 Other PET Containers & Packaging	0.1%	0.05%
	#2 HDPE Bottles/Jars - Clear	0.2%	0.07%
	#2 HDPE Bottles/ Jars - Color	0.2%	0.08%
	#2 Other HDPE Containers & Packaging	0.0%	0.02%
	#6 Expanded Polystyrene Packaging (EPS)	0.1%	0.05%
	#3-#7 Other - All	0.3%	0.15%
	Other Rigid Plastic Products	0.9%	0.45%
	Grocery & Merchandise Bags	0.1%	0.05%
	Trash Bags	0.3%	0.13%
	Commercial & Industrial Film	0.7%	0.43%
	Other Film	1.5%	1.42%
	Remainder/ Composite Plastic	0.3%	0.23%
Glass		**1.8%**	**1.25%**
	Glass Bottles and Jars - clear	1.2%	1.17%
	Glass Bottles and Jars - brown	0.2%	0.20%
	Glass Bottles and Jars - green	0.3%	0.19%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.03%

		Mean	+/-
Misc. Inorganic		**0.2%**	**0.20%**
	Televisions	0.0%	0.02%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.0%	0.03%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.2%	0.20%
Organics		**2.1%**	**1.34%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1%	0.09%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	1.8%	1.16%
	Bottom Fines and Dirt	0.1%	0.05%
	Diapers	0.1%	0.19%
	Other Organic	0.0%	0.01%
Metals		**1.1%**	**0.47%**
	Aluminum Beverage Containers	0.6%	0.42%
	Other Aluminum	0.0%	0.02%
	Ferrous containers (bi-metal cans)	0.1%	0.06%
	Aerosol cans	0.0%	0.02%
	Other Ferrous	0.2%	0.15%
	Other Non-Ferrous	0.1%	0.09%
	Other Metal	0.0%	0.02%
Textiles		**0.2%**	**0.16%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.2%	0.16%
HHW		**0.1%**	**0.04%**
	Household Hazardous Waste materials	0.1%	0.04%
C&D		**0.7%**	**0.49%**
	Construction and Demolition materials	0.7%	0.49%
Total Percentage		100.0%	

6.3.4.3 Recovered USD Residential/ICI MSW Composition

Figure 6-6 shows the percentage, by weight, of each of the ten material classes for the recovered USD residential/ICI MSW sector. Paper, Plastics, and Glass account for approximately 92% (78.7%, 9.8%, and 3.5%, respectively) of the recovered MSW for this sector.

Figure 6-6. Composition of Recovered USD Residential/ICI MSW by Material Class

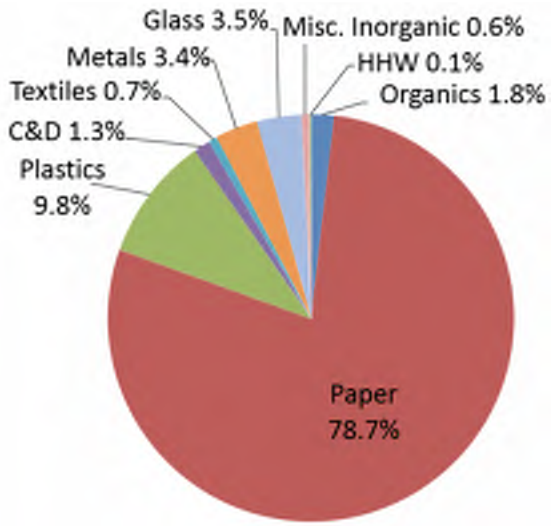


Table 6-12 lists the top ten material categories that were found in the recovered USD residential/ICI MSW sector. These ten categories account for approximately 82% of recovered USD MSW. Uncoated OCC, Magazines/Catalogs, and Boxboard material categories account for 55.9% (37.6%, 10.5%, and 7.9%, respectively) of recovered USD residential/ICI MSW.

Table 6-12. Top Ten Individual Material Categories in Recovered USD Residential/ICI MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	37.6%	37.6%
Magazines/Catalogs	10.5%	48.0%
Boxboard	7.9%	55.9%
Newsprint	7.6%	63.5%
High Grade Office Paper	5.8%	69.3%
Mixed Paper - Recyclable	4.6%	73.9%
Compostable Paper and 'other' paper	2.8%	76.6%
#1 PET Bottles/Jars	2.7%	79.3%
Kraft	1.7%	81.0%
Glass Bottles and Jars - clear	1.5%	82.5%
Total	**82.5%**	

Table 6-13 provides the composition profile of recovered USD residential/ICI MSW.

Table 6-13. Composition Profile of Recovered Urban Residential/ICI Materials Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**78.7%**	**3.10%**
	Newsprint	7.6%	1.24%
	High Grade Office Paper	5.8%	1.99%
	Magazines/Catalogs	10.5%	1.35%
	Uncoated OCC	37.6%	1.92%
	Kraft	1.7%	0.20%
	Boxboard	7.9%	0.55%
	Mixed Paper - Recyclable	4.6%	0.48%
	Compostable Paper and 'other' paper	2.8%	0.27%
	Milk and Juice cartons/boxes, coated	0.4%	0.04%
Plastics		**9.8%**	**0.58%**
	#1 PET Bottles/Jars	2.7%	0.23%
	#1 Other PET Containers & Packaging	0.6%	0.07%
	#2 HDPE Bottles/Jars - Clear	0.7%	0.08%
	#2 HDPE Bottles/ Jars - Color	0.9%	0.11%
	#2 Other HDPE Containers & Packaging	0.0%	0.02%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.07%
	#3-#7 Other - All	1.1%	0.10%
	Other Rigid Plastic Products	0.8%	0.11%
	Grocery & Merchandise Bags	0.3%	0.04%
	Trash Bags	0.3%	0.06%
	Commercial & Industrial Film	0.2%	0.04%
	Other Film	1.4%	0.17%
	Remainder/ Composite Plastic	0.6%	0.13%
Glass		**3.5%**	**0.90%**
	Glass Bottles and Jars - clear	1.5%	0.27%
	Glass Bottles and Jars - brown	1.3%	0.59%
	Glass Bottles and Jars - green	0.6%	0.16%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.1%	0.09%
	Other Glass	0.0%	0.02%

		Mean	+/-
Misc. Inorganic		**0.6%**	**0.25%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.2%	0.07%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.5%	0.21%
Organics		**1.8%**	**0.30%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.01%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	1.3%	0.27%
	Bottom Fines and Dirt	0.3%	0.06%
	Diapers	0.1%	0.03%
	Other Organic	0.2%	0.06%
Metals		**3.4%**	**0.34%**
	Aluminum Beverage Containers	1.4%	0.13%
	Other Aluminum	0.1%	0.03%
	Ferrous containers (bi-metal cans)	1.2%	0.13%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	0.5%	0.21%
	Other Non-Ferrous	0.1%	0.02%
	Other Metal	0.2%	0.07%
Textiles		**0.7%**	**0.42%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.7%	0.42%
HHW		**0.1%**	**0.04%**
	Household Hazardous Waste materials	0.1%	0.04%
C&D		**1.3%**	**0.63%**
	Construction and Demolition materials	1.3%	0.63%
Total Percentage		100.0%	

6.3.5 Recovered GSD MSW Composition

In determining the recovered GSD MSW composition for the residential and ICI sectors, the samples were split based on collection route within the GSD (including satellite cities). Out of 93 samples collected, a total of 18 (19%) samples were collected from the GSD MSW sector, 11 (61.1%) GSD samples were collected from the GSD residential MSW subsector and 7 (38.9%) GSD samples were collected from the GSD ICI MSW subsector.

6.3.5.1 Recovered GSD Residential MSW

Figure 6-7 shows the percentage, by weight, of each of the ten material classes for the recovered GSD residential MSW subsector. Paper, Plastics, and Metals account for approximately 93% (72.7%, 16.3%, and 4.1%, respectively) of the total MSW for this sector.

Figure 6-7. Composition of Recovered GSD Residential MSW by Material Class

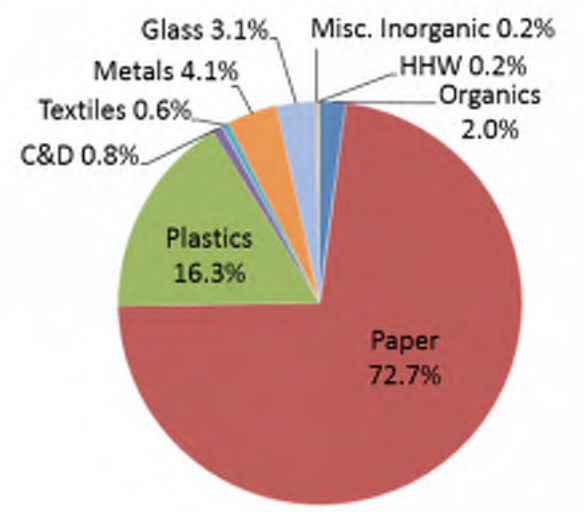


Table 6-14 lists the top ten material categories that were found in the recovered GSD residential MSW subsector. These ten categories account for approximately 80% of the recovered GSD residential MSW. Uncoated OCC, Newsprint, and Magazines/Catalogs material categories account for 46.7% (25%, 12.9%, and 8.9%, respectively) of the recovered GSD residential MSW.

Table 6-14. Top Ten Individual Material Categories in Recovered GSD Residential MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	25.0%	25.0%
Newsprint	12.9%	37.8%
Magazines/Catalogs	8.9%	46.7%
Boxboard	8.6%	55.3%
Mixed Paper - Recyclable	8.2%	63.4%
#1 PET Bottles/Jars	5.2%	68.7%
High Grade Office Paper	3.9%	72.6%
Compostable Paper and 'other' paper	3.2%	75.7%
Other Film	2.1%	77.8%
Kraft	1.8%	79.6%
Total	**79.6%**	

Table 6-15 provides the composition profile of recovered GSD residential MSW.

Table 6-15. Composition Profile of Recovered Rural Residential Materials Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**72.7%**	**8.25%**
	Newsprint	12.9%	5.84%
	High Grade Office Paper	3.9%	0.99%
	Magazines/Catalogs	8.9%	2.78%
	Uncoated OCC	25.0%	6.10%
	Kraft	1.8%	0.63%
	Boxboard	8.6%	2.15%
	Mixed Paper - Recyclable	8.2%	1.76%
	Compostable Paper and 'other' paper	3.2%	1.00%
	Milk and Juice cartons/boxes, coated	0.4%	0.17%
Plastics		**16.3%**	**2.89%**
	#1 PET Bottles/Jars	5.2%	1.30%
	#1 Other PET Containers & Packaging	1.1%	0.44%
	#2 HDPE Bottles/Jars - Clear	1.4%	0.49%
	#2 HDPE Bottles/ Jars - Color	1.6%	0.54%
	#2 Other HDPE Containers & Packaging	0.1%	0.10%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.11%
	#3-#7 Other - All	1.6%	0.51%
	Other Rigid Plastic Products	1.2%	0.47%
	Grocery & Merchandise Bags	0.6%	0.13%
	Trash Bags	0.3%	0.10%
	Commercial & Industrial Film	0.0%	0.01%
	Other Film	2.1%	0.81%
	Remainder/ Composite Plastic	0.9%	0.86%
Glass		**3.1%**	**1.15%**
	Glass Bottles and Jars - clear	1.4%	0.54%
	Glass Bottles and Jars - brown	1.1%	0.50%
	Glass Bottles and Jars - green	0.3%	0.28%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.2%	0.32%
	Other Glass	0.1%	0.07%

		Mean	+/-
Misc. Inorganic		**0.2%**	**0.27%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.0%	0.01%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.2%	0.27%
Organics		**2.0%**	**1.17%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.6%	0.96%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	0.8%	0.60%
	Bottom Fines and Dirt	0.3%	0.10%
	Diapers	0.3%	0.41%
	Other Organic	0.0%	0.03%
Metals		**4.1%**	**0.97%**
	Aluminum Beverage Containers	1.4%	0.62%
	Other Aluminum	0.3%	0.33%
	Ferrous containers (bi-metal cans)	1.4%	0.46%
	Aerosol cans	0.1%	0.08%
	Other Ferrous	0.5%	0.38%
	Other Non-Ferrous	0.1%	0.05%
	Other Metal	0.2%	0.09%
Textiles		**0.6%**	**0.38%**
	Carpet and carpet padding	0.0%	0.04%
	Clothing and other textiles	0.6%	0.39%
HHW		**0.2%**	**0.20%**
	Household Hazardous Waste materials	0.2%	0.20%
C&D		**0.8%**	**0.64%**
	Construction and Demolition materials	0.8%	0.64%
Total Percentage		100.0%	

6.3.5.2 Recovered GSD ICI MSW

Figure 6-8 shows the percentage, by weight, of each of the ten material classes for the recovered GSD ICI MSW subsector. Paper, C&D, and Plastics account for approximately 93% (82.0%, 5.8%, and 5.3%, respectively) of the recovered MSW for this subsector.

Figure 6-8. Composition of Recovered GSD ICI MSW by Material Class

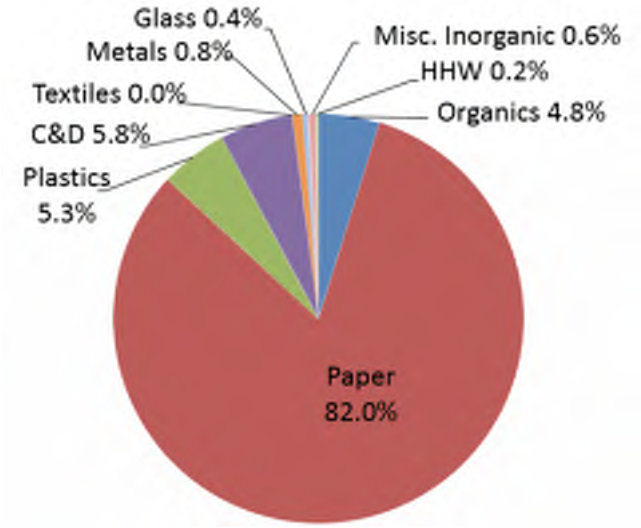


Table 6-16 lists the top ten material categories that were found in the recovered GSD ICI MSW subsector. These ten categories account for approximately 92% of recovered GSD ICI MSW. Uncoated OCC, Construction and Demolition materials, and Food Scraps material categories account for 81.1% (72%, 5.8%, and 3.3%, respectively) of recovered GSD ICI MSW.

Table 6-16. Top Ten Individual Material Categories in Recovered GSD ICI MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	72.0%	72.0%
Construction and Demolition materials	5.8%	77.8%
Food Scraps	3.3%	81.1%
Boxboard	2.8%	83.8%
Mixed Paper - Recyclable	2.2%	86.0%
Compostable Paper and 'other' paper	1.9%	87.9%
Diapers	1.1%	89.1%
High Grade Office Paper	1.0%	90.1%
Kraft	0.8%	90.9%
#3-#7 Other - All	0.8%	91.7%
Total	**91.7%**	

Table 6-17 provides the composition profile of recovered GSD ICI MSW.

Table 6-17. Composition Profile of Recovered Rural ICI Materials

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**82.0%**	**11.93%**
	Newsprint	0.5%	0.37%
	High Grade Office Paper	1.0%	1.27%
	Magazines/Catalogs	0.7%	0.57%
	Uncoated OCC	72.0%	11.38%
	Kraft	0.8%	0.75%
	Boxboard	2.8%	0.56%
	Mixed Paper - Recyclable	2.2%	2.55%
	Compostable Paper and 'other' paper	1.9%	1.33%
	Milk and Juice cartons/boxes, coated	0.2%	0.21%
Plastics		**5.3%**	**3.53%**
	#1 PET Bottles/Jars	0.5%	0.35%
	#1 Other PET Containers & Packaging	0.0%	0.02%
	#2 HDPE Bottles/Jars - Clear	0.2%	0.15%
	#2 HDPE Bottles/ Jars - Color	0.3%	0.21%
	#2 Other HDPE Containers & Packaging	0.0%	0.00%
	#6 Expanded Polystyrene Packaging (EPS)	0.7%	0.66%
	#3-#7 Other - All	0.8%	1.12%
	Other Rigid Plastic Products	0.5%	0.40%
	Grocery & Merchandise Bags	0.1%	0.05%
	Trash Bags	0.6%	0.92%
	Commercial & Industrial Film	0.4%	0.54%
	Other Film	0.8%	0.64%
	Remainder/ Composite Plastic	0.5%	0.67%
Glass		**0.4%**	**0.39%**
	Glass Bottles and Jars - clear	0.3%	0.34%
	Glass Bottles and Jars - brown	0.0%	0.05%
	Glass Bottles and Jars - green	0.0%	0.00%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**0.6%**	**1.01%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.1%	0.12%
	Electronic Equipment	0.6%	0.89%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.0%	0.00%
Organics		**4.8%**	**7.07%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.3%	0.31%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	3.3%	5.00%
	Bottom Fines and Dirt	0.1%	0.09%
	Diapers	1.1%	1.84%
	Other Organic	0.0%	0.02%
Metals		**0.8%**	**0.50%**
	Aluminum Beverage Containers	0.2%	0.09%
	Other Aluminum	0.1%	0.14%
	Ferrous containers (bi-metal cans)	0.4%	0.27%
	Aerosol cans	0.0%	0.00%
	Other Ferrous	0.1%	0.12%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.0%	0.06%
Textiles		**0.0%**	**0.07%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.0%	0.07%
HHW		**0.2%**	**0.30%**
	Household Hazardous Waste materials	0.2%	0.30%
C&D		**5.8%**	**8.60%**
	Construction and Demolition materials	5.8%	8.60%
Total Percentage		100.0%	

6.3.5.3 Recovered GSD Residential/ICI MSW Composition

Figure 6-9 shows the percentage, by weight, of each of the ten material classes for the recovered GSD residential/ICI MSW sector. Paper, Plastics, and Metals account for approximately 92% (75.3%, 13.3%, and 3.2%, respectively) of the recovered MSW for this sector.

Figure 6-9. Composition of Recovered GSD Residential/ICI MSW by Material Class

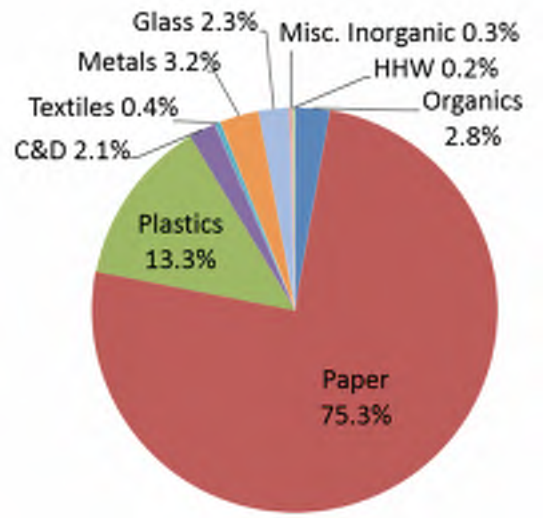


Table 6-18 lists the top ten material categories that were found in the recovered GSD residential/ICI MSW sector. These ten categories account for approximately 82% of recovered GSD residential/ICI MSW. Uncoated OCC, Newsprint, and Boxboard material categories account for 54.3% (37.8%, 9.5%, and 7%, respectively) of recovered GSD residential/ICI MSW.

Table 6-18. Top Ten Individual Material Categories in Recovered GSD Residential/ICI MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	37.8%	37.8%
Newsprint	9.5%	47.3%
Boxboard	7.0%	54.3%
Magazines/Catalogs	6.6%	60.9%
Mixed Paper - Recyclable	6.5%	67.4%
#1 PET Bottles/Jars	3.9%	71.4%
High Grade Office Paper	3.1%	74.5%
Compostable Paper and 'other' paper	2.8%	77.3%
Yard Waste - Compostable; leaves, grass, branches <0.5"	2.8%	80.1%
Construction and Demolition materials	2.1%	82.2%
Total	**82.2%**	

Table 6-19 provides the composition profile of recovered GSD residential/ICI MSW.

Table 6-19. Composition Profile of Recovered Rural Residential/ICI Materials Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**75.3%**	**5.42%**
	Newsprint	9.5%	3.79%
	High Grade Office Paper	3.1%	0.65%
	Magazines/Catalogs	6.6%	1.80%
	Uncoated OCC	37.8%	4.04%
	Kraft	1.5%	0.41%
	Boxboard	7.0%	1.40%
	Mixed Paper - Recyclable	6.5%	1.15%
	Compostable Paper and 'other' paper	2.8%	0.66%
	Milk and Juice cartons/boxes, coated	0.4%	0.11%
Plastics		**13.3%**	**1.89%**
	#1 PET Bottles/Jars	3.9%	0.84%
	#1 Other PET Containers & Packaging	0.8%	0.29%
	#2 HDPE Bottles/Jars - Clear	1.1%	0.32%
	#2 HDPE Bottles/ Jars - Color	1.2%	0.35%
	#2 Other HDPE Containers & Packaging	0.1%	0.06%
	#6 Expanded Polystyrene Packaging (EPS)	0.4%	0.09%
	#3-#7 Other - All	1.4%	0.34%
	Other Rigid Plastic Products	1.0%	0.30%
	Grocery & Merchandise Bags	0.4%	0.09%
	Trash Bags	0.4%	0.09%
	Commercial & Industrial Film	0.1%	0.04%
	Other Film	1.7%	0.53%
	Remainder/ Composite Plastic	0.8%	0.56%
Glass		**2.3%**	**0.75%**
	Glass Bottles and Jars - clear	1.1%	0.35%
	Glass Bottles and Jars - brown	0.8%	0.33%
	Glass Bottles and Jars - green	0.3%	0.18%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.1%	0.21%
	Other Glass	0.0%	0.04%

		Mean	+/-
Misc. Inorganic		**0.3%**	**0.19%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.01%
	Electronic Equipment	0.2%	0.07%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.1%	0.17%
Organics		**2.8%**	**0.92%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.5%	0.62%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	1.5%	0.54%
	Bottom Fines and Dirt	0.3%	0.06%
	Diapers	0.5%	0.30%
	Other Organic	0.0%	0.02%
Metals		**3.2%**	**0.63%**
	Aluminum Beverage Containers	1.1%	0.40%
	Other Aluminum	0.3%	0.21%
	Ferrous containers (bi-metal cans)	1.1%	0.30%
	Aerosol cans	0.1%	0.05%
	Other Ferrous	0.4%	0.25%
	Other Non-Ferrous	0.1%	0.03%
	Other Metal	0.1%	0.06%
Textiles		**0.4%**	**0.25%**
	Carpet and carpet padding	0.0%	0.03%
	Clothing and other textiles	0.4%	0.25%
HHW		**0.2%**	**0.13%**
	Household Hazardous Waste materials	0.2%	0.13%
C&D		**2.1%**	**0.76%**
	Construction and Demolition materials	2.1%	0.76%
Total Percentage		100.0%	

6.3.6 Recovered Metro MSW Composition

The sample data has also been evaluated to compare the composition of Metro and non-Metro recycling collection routes. Metro collection is provided by Metro trucks and subcontracted out to Rock River Disposal and the collection routes include:

- ICI within the Central Business District (CBD);
- Residential single-family homes (SFH) within the USD; and
- Convenience Centers

All collection routes not listed above and all collection provided by private haulers is categorized as "non-Metro". **Table 6-20** summarizes the summer and fall samples combined that were used to determine the recovered compositions. A total of 93 recovered material samples were processed. Of the 93 samples processed, 49 (53%) were Metro collected and 44 (47%) were non-Metro collection. 44 (89.8%) Metro samples were collected from the residential sector and 5 (10.2%) Metro samples were collected from the ICI sector.

Table 6-20. Number of Landfilled Samples by Collection Route

Sampling Group	Sample Count		Total Sample Wt.
	No.	%	(pounds)
Metro	49	100%	12,245
RES	*44*	*89.8%*	*10,347*
ICI	*5*	*10.2%*	*1,205*
Non-Metro	44	100%	9,630
RES	*9*	*20.5%*	*1,898*
ICI	*35*	*79.5%*	*8,425*
Total	**93**	**100%**	**21,874**

6.3.6.1 Recovered Metro Residential MSW

Figure 6-10 shows the percentage, by weight, of each of the ten material classes for the recovered Metro residential MSW subsector. Paper, Plastics, and Metals account for approximately 91% (74.9%, 11.5%, and 4.2%, respectively) of the recovered MSW for this sector.

Figure 6-10. Composition of Recovered Metro Residential MSW by Material Class

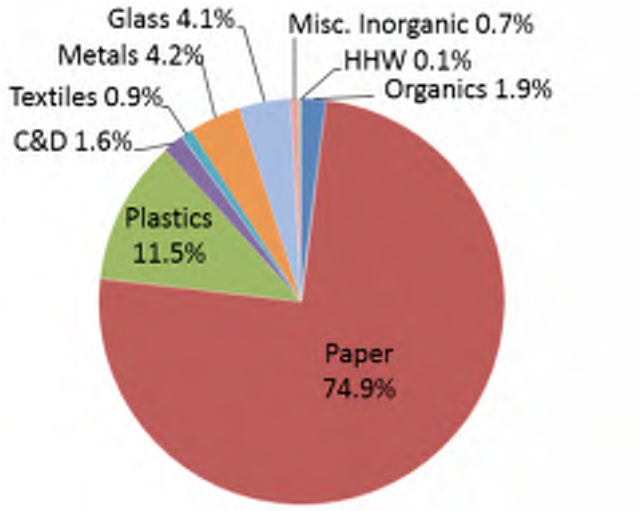


Table 6-21 lists the top ten material categories that were found in the recovered Metro residential MSW subsector. These ten categories account for approximately 80% of recovered Metro residential MSW. Uncoated OCC, Magazines/Catalogs, and Newsprint material categories account for 49.2% (25.9%, 12.4%, and 10.9%, respectively) of recovered Metro residential MSW.

Table 6-21. Top Ten Individual Material Categories in Recovered Metro Residential MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	25.9%	25.9%
Magazines/Catalogs	12.4%	38.3%
Newsprint	10.9%	49.2%
Boxboard	8.3%	57.5%
Mixed Paper - Recyclable	6.3%	63.8%
High Grade Office Paper	5.5%	69.3%
#1 PET Bottles/Jars	3.6%	72.9%
Compostable Paper and 'other' paper	3.2%	76.1%
Kraft	1.9%	78.0%
Aluminum Beverage Containers	1.6%	79.6%
Total	**79.6%**	

Table 6-22 provides the composition profile of recovered Metro residential MSW.

Table 6-22. Composition Profile of Recovered Metro Residential Materials Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**74.9%**	**5.49%**
	Newsprint	10.9%	2.49%
	High Grade Office Paper	5.5%	3.50%
	Magazines/Catalogs	12.4%	2.30%
	Uncoated OCC	25.9%	3.30%
	Kraft	1.9%	0.34%
	Boxboard	8.3%	0.90%
	Mixed Paper - Recyclable	6.3%	0.94%
	Compostable Paper and 'other' paper	3.2%	0.49%
	Milk and Juice cartons/boxes, coated	0.4%	0.08%
Plastics		**11.5%**	**1.09%**
	#1 PET Bottles/Jars	3.6%	0.44%
	#1 Other PET Containers & Packaging	0.7%	0.15%
	#2 HDPE Bottles/Jars - Clear	0.9%	0.16%
	#2 HDPE Bottles/ Jars - Color	1.1%	0.19%
	#2 Other HDPE Containers & Packaging	0.1%	0.05%
	#6 Expanded Polystyrene Packaging (EPS)	0.4%	0.12%
	#3-#7 Other - All	1.3%	0.18%
	Other Rigid Plastic Products	0.8%	0.19%
	Grocery & Merchandise Bags	0.3%	0.07%
	Trash Bags	0.4%	0.10%
	Commercial & Industrial Film	0.0%	0.03%
	Other Film	1.3%	0.24%
	Remainder/ Composite Plastic	0.7%	0.23%
Glass		**4.1%**	**1.60%**
	Glass Bottles and Jars - clear	1.6%	0.45%
	Glass Bottles and Jars - brown	1.6%	1.05%
	Glass Bottles and Jars - green	0.7%	0.30%
	Glass Bottles and Jars - blue	0.0%	0.02%
	Flat Glass	0.1%	0.22%
	Other Glass	0.0%	0.04%

		Mean	+/-
Misc. Inorganic		**0.7%**	**0.45%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.2%	0.15%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.6%	0.42%
Organics		**1.9%**	**0.55%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.2%	0.28%
	Yard Waste - Woody; branch >0.5"	0.0%	0.02%
	Food Scraps	1.1%	0.47%
	Bottom Fines and Dirt	0.3%	0.10%
	Diapers	0.1%	0.12%
	Other Organic	0.2%	0.11%
Metals		**4.2%**	**0.62%**
	Aluminum Beverage Containers	1.6%	0.23%
	Other Aluminum	0.1%	0.06%
	Ferrous containers (bi-metal cans)	1.5%	0.22%
	Aerosol cans	0.1%	0.03%
	Other Ferrous	0.6%	0.38%
	Other Non-Ferrous	0.1%	0.05%
	Other Metal	0.2%	0.14%
Textiles		**0.9%**	**0.76%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.9%	0.80%
HHW		**0.1%**	**0.07%**
	Household Hazardous Waste materials	0.1%	0.08%
C&D		**1.6%**	**1.12%**
	Construction and Demolition materials	1.6%	1.20%
Total Percentage		100.0%	

6.3.6.2 Recovered Metro ICI MSW

Figure 6-11 shows the percentage, by weight, of each of the ten material classes for the recovered Metro ICI MSW subsector. Paper, Plastics, and Glass account for approximately 99% (97.2%, 1.9%, and 0.3%, respectively) of the recovered MSW for this subsector.

Figure 6-11. Composition of Recovered Metro ICI MSW by Material Class

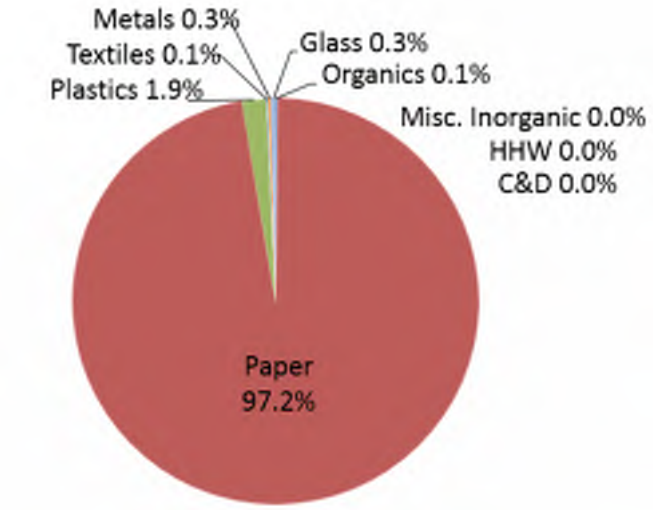


Table 6-23 lists the top ten material categories that were found in the recovered Metro ICI MSW subsector. These ten categories account for approximately 98% of the recovered Metro ICI MSW. Uncoated OCC, Boxboard, and High Grade Office Paper material categories account for 93.7% (70.3%, 13.3%, and 10.2%, respectively) of recovered Metro ICI MSW.

Table 6-23. Top Ten Individual Material Categories in Recovered Metro ICI MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	70.3%	70.3%
Boxboard	13.3%	83.6%
High Grade Office Paper	10.2%	93.7%
Newsprint	1.0%	94.7%
Magazines/Catalogs	0.7%	95.4%
Mixed Paper - Recyclable	0.7%	96.2%
Kraft	0.7%	96.8%
#1 PET Bottles/Jars	0.6%	97.4%
Other Rigid Plastic Products	0.3%	97.7%
Other Film	0.3%	98.0%
Total	**98.0%**	

Table 6-24 provides the composition profile of the recovered Metro ICI MSW sector.

Table 6-24. Composition Profile of Recovered Metro ICI Materials

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**97.2%**	**14.25%**
	Newsprint	1.0%	1.56%
	High Grade Office Paper	10.2%	16.55%
	Magazines/Catalogs	0.7%	1.10%
	Uncoated OCC	70.3%	25.88%
	Kraft	0.7%	1.19%
	Boxboard	13.3%	8.99%
	Mixed Paper - Recyclable	0.7%	1.01%
	Compostable Paper and 'other' paper	0.3%	0.26%
	Milk and Juice cartons/boxes, coated	0.1%	0.30%
Plastics		**1.9%**	**0.89%**
	#1 PET Bottles/Jars	0.6%	0.82%
	#1 Other PET Containers & Packaging	0.0%	0.09%
	#2 HDPE Bottles/Jars - Clear	0.1%	0.18%
	#2 HDPE Bottles/ Jars - Color	0.1%	0.14%
	#2 Other HDPE Containers & Packaging	0.0%	0.07%
	#6 Expanded Polystyrene Packaging (EPS)	0.0%	0.01%
	#3-#7 Other - All	0.2%	0.11%
	Other Rigid Plastic Products	0.3%	0.44%
	Grocery & Merchandise Bags	0.0%	0.00%
	Trash Bags	0.2%	0.12%
	Commercial & Industrial Film	0.0%	0.05%
	Other Film	0.3%	0.41%
	Remainder/ Composite Plastic	0.0%	0.02%
Glass		**0.3%**	**0.29%**
	Glass Bottles and Jars - clear	0.1%	0.18%
	Glass Bottles and Jars - brown	0.1%	0.15%
	Glass Bottles and Jars - green	0.1%	0.16%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.00%

		Mean	+/-
Misc. Inorganic		**0.0%**	**0.00%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.0%	0.00%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.0%	0.00%
Organics		**0.1%**	**0.15%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.05%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	0.1%	0.17%
	Bottom Fines and Dirt	0.0%	0.00%
	Diapers	0.0%	0.00%
	Other Organic	0.0%	0.00%
Metals		**0.3%**	**0.26%**
	Aluminum Beverage Containers	0.2%	0.22%
	Other Aluminum	0.0%	0.00%
	Ferrous containers (bi-metal cans)	0.0%	0.05%
	Aerosol cans	0.0%	0.07%
	Other Ferrous	0.0%	0.02%
	Other Non-Ferrous	0.0%	0.00%
	Other Metal	0.0%	0.00%
Textiles		**0.1%**	**0.11%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.1%	0.12%
HHW		**0.0%**	**0.01%**
	Household Hazardous Waste materials	0.0%	0.02%
C&D		**0.0%**	**0.08%**
	Construction and Demolition materials	0.0%	0.11%
Total Percentage		100.0%	

6.3.6.3 Recovered Metro Residential/ICI MSW Composition

Figure 6-12 shows the percentage, by weight, of each of the ten material classes for the recovered Metro residential/ICI MSW sector. Paper, Plastics, and Metals account for approximately 93% (81.0%, 8.9%, and 3.1%, respectively) of the recovered MSW for this sector.

Figure 6-12. Composition of Recovered Metro Residential/ICI MSW by Material Class

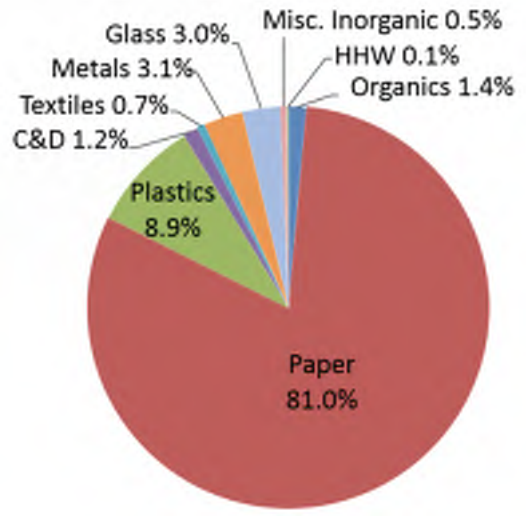


Table 6-25 lists the top ten material categories that were found in the recovered Metro residential/ICI MSW sector. These ten categories account for approximately 85% of recovered Metro MSW. Uncoated OCC, Boxboard, and Magazines/Catalogs material categories account for 56.9% (38%, 9.6%, and 9.2%, respectively) of recovered Metro residential/ICI MSW.

Table 6-25. Top Ten Individual Material Categories in Recovered Metro Residential/ICI MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	38.0%	38.0%
Boxboard	9.6%	47.6%
Magazines/Catalogs	9.2%	56.9%
Newsprint	8.2%	65.1%
High Grade Office Paper	6.8%	71.9%
Mixed Paper - Recyclable	4.8%	76.6%
#1 PET Bottles/Jars	2.8%	79.4%
Compostable Paper and 'other' paper	2.4%	81.8%
Kraft	1.6%	83.4%
Aluminum Beverage Containers	1.2%	84.6%
Total	**84.6%**	

Table 6-26 provides the composition profile of recovered Metro residential/ICI MSW.

Table 6-26. Composition Profile of Recovered Metro Residential/ICI Materials

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**81.0%**	**3.09%**
	Newsprint	8.2%	1.32%
	High Grade Office Paper	6.8%	2.23%
	Magazines/Catalogs	9.2%	1.22%
	Uncoated OCC	38.0%	2.60%
	Kraft	1.6%	0.20%
	Boxboard	9.6%	0.82%
	Mixed Paper - Recyclable	4.8%	0.50%
	Compostable Paper and 'other' paper	2.4%	0.26%
	Milk and Juice cartons/boxes, coated	0.4%	0.05%
Plastics		**8.9%**	**0.58%**
	#1 PET Bottles/Jars	2.8%	0.24%
	#1 Other PET Containers & Packaging	0.5%	0.08%
	#2 HDPE Bottles/Jars - Clear	0.7%	0.09%
	#2 HDPE Bottles/ Jars - Color	0.8%	0.10%
	#2 Other HDPE Containers & Packaging	0.1%	0.02%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.06%
	#3-#7 Other - All	1.0%	0.09%
	Other Rigid Plastic Products	0.7%	0.10%
	Grocery & Merchandise Bags	0.3%	0.04%
	Trash Bags	0.3%	0.05%
	Commercial & Industrial Film	0.0%	0.02%
	Other Film	1.0%	0.13%
	Remainder/ Composite Plastic	0.5%	0.12%
Glass		**3.0%**	**0.85%**
	Glass Bottles and Jars - clear	1.2%	0.24%
	Glass Bottles and Jars - brown	1.2%	0.55%
	Glass Bottles and Jars - green	0.5%	0.16%
	Glass Bottles and Jars - blue	0.0%	0.01%
	Flat Glass	0.1%	0.11%
	Other Glass	0.0%	0.02%

		Mean	+/-
Misc. Inorganic		**0.5%**	**0.24%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.1%	0.08%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.4%	0.22%
Organics		**1.4%**	**0.29%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1%	0.15%
	Yard Waste - Woody; branch >0.5"	0.0%	0.01%
	Food Scraps	0.8%	0.25%
	Bottom Fines and Dirt	0.2%	0.05%
	Diapers	0.1%	0.06%
	Other Organic	0.1%	0.06%
Metals		**3.1%**	**0.33%**
	Aluminum Beverage Containers	1.2%	0.12%
	Other Aluminum	0.1%	0.03%
	Ferrous containers (bi-metal cans)	1.1%	0.11%
	Aerosol cans	0.1%	0.02%
	Other Ferrous	0.4%	0.20%
	Other Non-Ferrous	0.0%	0.03%
	Other Metal	0.1%	0.07%
Textiles		**0.7%**	**0.40%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.7%	0.42%
HHW		**0.1%**	**0.04%**
	Household Hazardous Waste materials	0.1%	0.04%
C&D		**1.2%**	**0.59%**
	Construction and Demolition materials	1.2%	0.63%
Total Percentage		100.0%	

6.3.7 Recovered Non-Metro MSW Composition

In determining the recovered non-Metro composition for the residential and ICI sectors, the samples were split based on collection route. Out of 93 samples collected, a total of 44 (47%) samples were processed from the non-Metro haulers/haul routes, where 9 (20.5%) non-Metro samples were from the residential subsector and 35 (79.5%) non-Metro samples were from the ICI subsector. Refer to **Table 6-20** for details on the Metro and non-Metro recovered materials sample processing distribution.

6.3.7.1 Recovered Non-Metro Residential MSW

Figure 6-13 shows the percentage, by weight, of each of the ten material classes for the recovered non-Metro residential MSW subsector. Paper, Plastics, and Metals account for approximately 94% (72.5%, 17.5%, and 4.5%, respectively) of the total MSW for this sector.

Figure 6-13. Composition of Recovered Non-Metro Residential MSW by Material Class

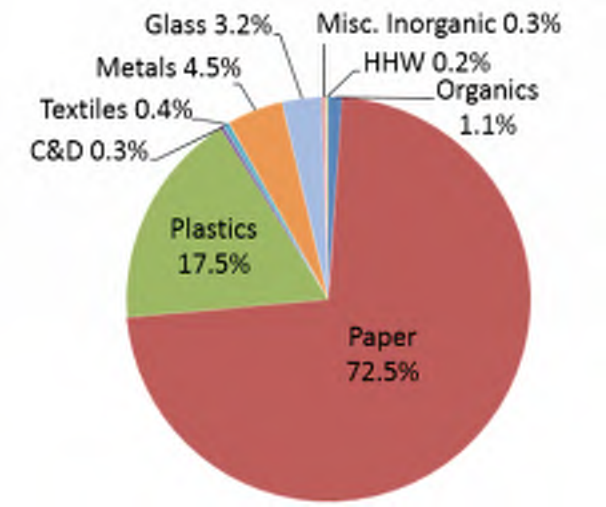


Table 6-27 lists the top ten material categories that were found in the recovered non-Metro residential MSW subsector. These ten categories account for approximately 80% of the recovered non-Metro residential MSW. Uncoated OCC, Newsprint, and Magazines/Catalogs material categories account for 46.9% (27.4%, 10.2%, and 9.3%, respectively) of the recovered non-Metro residential MSW.

Table 6-27. Top Ten Individual Material Categories in Recovered Non-Metro Residential MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	27.4%	27.4%
Newsprint	10.2%	37.6%
Magazines/Catalogs	9.3%	46.9%
Boxboard	8.4%	55.3%
Mixed Paper - Recyclable	6.9%	62.2%
#1 PET Bottles/Jars	5.4%	67.6%
High Grade Office Paper	4.7%	72.3%
Compostable Paper and 'other' paper	2.9%	75.2%
Other Film	2.4%	77.6%
Kraft	2.2%	79.8%
Total	**79.8%**	

Table 6-28 provides the composition profile of recovered non-Metro residential MSW.

Table 6-28. Composition Profile of Recovered Non-Metro Residential Materials Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**72.5%**	**9.33%**
	Newsprint	10.2%	4.17%
	High Grade Office Paper	4.7%	1.51%
	Magazines/Catalogs	9.3%	3.59%
	Uncoated OCC	27.4%	7.50%
	Kraft	2.2%	0.84%
	Boxboard	8.4%	2.59%
	Mixed Paper - Recyclable	6.9%	1.50%
	Compostable Paper and 'other' paper	2.9%	1.00%
	Milk and Juice cartons/boxes, coated	0.5%	0.16%
Plastics		**17.5%**	**3.37%**
	#1 PET Bottles/Jars	5.4%	1.59%
	#1 Other PET Containers & Packaging	1.2%	0.36%
	#2 HDPE Bottles/Jars - Clear	1.3%	0.49%
	#2 HDPE Bottles/ Jars - Color	1.7%	0.65%
	#2 Other HDPE Containers & Packaging	0.1%	0.14%
	#6 Expanded Polystyrene Packaging (EPS)	0.2%	0.10%
	#3-#7 Other - All	2.1%	0.49%
	Other Rigid Plastic Products	1.1%	0.57%
	Grocery & Merchandise Bags	0.5%	0.16%
	Trash Bags	0.3%	0.13%
	Commercial & Industrial Film	0.0%	0.02%
	Other Film	2.4%	1.02%
	Remainder/ Composite Plastic	1.0%	1.25%
Glass		**3.2%**	**1.58%**
	Glass Bottles and Jars - clear	1.5%	0.68%
	Glass Bottles and Jars - brown	1.1%	0.69%
	Glass Bottles and Jars - green	0.2%	0.35%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.3%	0.90%
	Other Glass	0.1%	0.13%

		Mean	+/-
Misc. Inorganic		**0.3%**	**0.37%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.1%	0.26%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.2%	0.47%
Organics		**1.1%**	**0.71%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.0%	0.04%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	0.6%	0.76%
	Bottom Fines and Dirt	0.4%	0.13%
	Diapers	0.0%	0.09%
	Other Organic	0.0%	0.04%
Metals		**4.5%**	**1.12%**
	Aluminum Beverage Containers	1.6%	0.78%
	Other Aluminum	0.4%	0.46%
	Ferrous containers (bi-metal cans)	1.6%	0.66%
	Aerosol cans	0.2%	0.09%
	Other Ferrous	0.5%	0.53%
	Other Non-Ferrous	0.1%	0.07%
	Other Metal	0.2%	0.10%
Textiles		**0.4%**	**0.29%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.4%	0.32%
HHW		**0.2%**	**0.25%**
	Household Hazardous Waste materials	0.2%	0.37%
C&D		**0.3%**	**0.51%**
	Construction and Demolition materials	0.3%	0.86%
Total Percentage		100.0%	

6.3.7.2 Recovered Non-Metro ICI MSW

Figure 6-14 shows the percentage, by weight, of each of the ten material classes for the recovered non-Metro ICI MSW subsector. Paper, Plastics, and Organics account for approximately 95% (85.9%, 5.9%, and 2.9%, respectively) of the recovered MSW for this subsector.

Figure 6-14. Composition of Recovered Non-Metro ICI MSW by Material Class

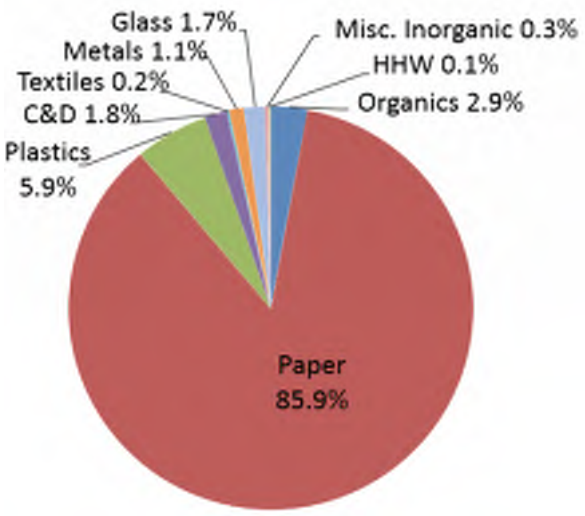


Table 6-29 lists the top ten material categories that were found in the recovered non-Metro ICI MSW subsector. These ten categories account for approximately 91% of recovered non-Metro ICI MSW. Uncoated OCC, Boxboard, and Magazines/Catalogs material categories account for 77.2% (67.9%, 5.1%, and 4.2%, respectively) of recovered non-Metro ICI MSW.

Table 6-29. Top Ten Individual Material Categories in Recovered Non-Metro ICI MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	67.9%	67.9%
Boxboard	5.1%	73.0%
Magazines/Catalogs	4.2%	77.2%
High Grade Office Paper	4.1%	81.4%
Food Scraps	2.3%	83.7%
Compostable Paper and 'other' paper	1.8%	85.5%
Construction and Demolition materials	1.8%	87.3%
Other Film	1.6%	88.8%
Mixed Paper - Recyclable	1.3%	90.1%
Glass Bottles and Jars - clear	1.2%	91.3%
Total	**91.3%**	

Table 6-30 provides the composition profile of recovered non-Metro ICI MSW.

Table 6-30. Composition Profile of Recovered Non-Metro ICI Materials

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**85.9%**	**5.47%**
	Newsprint	0.5%	0.26%
	High Grade Office Paper	4.1%	3.44%
	Magazines/Catalogs	4.2%	6.14%
	Uncoated OCC	67.9%	6.43%
	Kraft	0.9%	0.50%
	Boxboard	5.1%	2.66%
	Mixed Paper - Recyclable	1.3%	0.72%
	Compostable Paper and 'other' paper	1.8%	0.50%
	Milk and Juice cartons/boxes, coated	0.1%	0.05%
Plastics		**5.9%**	**1.89%**
	#1 PET Bottles/Jars	0.6%	0.26%
	#1 Other PET Containers & Packaging	0.1%	0.05%
	#2 HDPE Bottles/Jars - Clear	0.2%	0.07%
	#2 HDPE Bottles/ Jars - Color	0.2%	0.09%
	#2 Other HDPE Containers & Packaging	0.0%	0.02%
	#6 Expanded Polystyrene Packaging (EPS)	0.3%	0.15%
	#3-#7 Other - All	0.4%	0.26%
	Other Rigid Plastic Products	0.9%	0.44%
	Grocery & Merchandise Bags	0.1%	0.05%
	Trash Bags	0.4%	0.22%
	Commercial & Industrial Film	0.7%	0.44%
	Other Film	1.6%	1.34%
	Remainder/ Composite Plastic	0.4%	0.26%
Glass		**1.7%**	**1.19%**
	Glass Bottles and Jars - clear	1.2%	1.20%
	Glass Bottles and Jars - brown	0.2%	0.21%
	Glass Bottles and Jars - green	0.2%	0.22%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.0%	0.00%
	Other Glass	0.0%	0.04%

		Mean	+/-
Misc. Inorganic		**0.3%**	**0.27%**
	Televisions	0.0%	0.02%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.03%
	Electronic Equipment	0.1%	0.21%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.2%	0.22%
Organics		**2.9%**	**1.83%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1%	0.13%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	2.3%	1.50%
	Bottom Fines and Dirt	0.1%	0.06%
	Diapers	0.3%	0.50%
	Other Organic	0.0%	0.02%
Metals		**1.1%**	**0.45%**
	Aluminum Beverage Containers	0.6%	0.41%
	Other Aluminum	0.1%	0.04%
	Ferrous containers (bi-metal cans)	0.2%	0.09%
	Aerosol cans	0.0%	0.02%
	Other Ferrous	0.2%	0.16%
	Other Non-Ferrous	0.1%	0.11%
	Other Metal	0.0%	0.03%
Textiles		**0.2%**	**0.15%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.2%	0.17%
HHW		**0.1%**	**0.07%**
	Household Hazardous Waste materials	0.1%	0.08%
C&D		**1.8%**	**1.76%**
	Construction and Demolition materials	1.8%	2.10%
Total Percentage		100.0%	

6.3.7.3 Recovered Non-Metro Residential/ICI MSW Composition

Figure 6-15 shows the percentage, by weight, of each of the ten material classes for the recovered non-Metro residential/ICI MSW sector. Paper, Plastics, and Metals account for approximately 94% (76.2%, 14.3%, and 3.6%, respectively) of the recovered MSW for this sector.

Figure 6-15. Composition of Recovered Non-Metro Residential/ICI MSW by Material Class

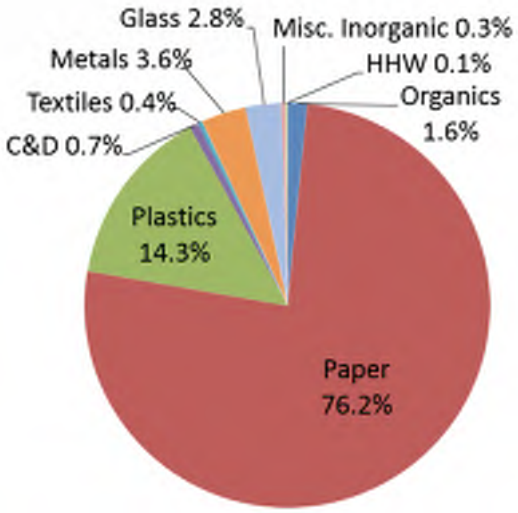


Table 6-31 lists the top ten material categories that were found in the recovered non-Metro residential/ICI MSW sector. These ten categories account for approximately 82% of recovered non-Metro residential/ICI MSW. Uncoated OCC, Magazines/Catalogs, and Newsprint material categories account for 53.9% (38.5%, 7.9%, and 7.5%, respectively) of recovered non-Metro residential/ICI MSW.

Table 6-31. Top Ten Individual Material Categories in Recovered Non-Metro Residential/ICI MSW

Category	Waste Composition %	Cum. %
Uncoated OCC	38.5%	38.5%
Magazines/Catalogs	7.9%	46.4%
Newsprint	7.5%	53.9%
Boxboard	7.5%	61.4%
Mixed Paper - Recyclable	5.4%	66.8%
High Grade Office Paper	4.5%	71.3%
#1 PET Bottles/Jars	4.1%	75.4%
Compostable Paper and 'other' paper	2.6%	78.0%
Other Film	2.2%	80.2%
Kraft	1.8%	82.0%
Total	**82.0%**	

Table 6-32 provides the composition profile of recovered non-Metro residential/ICI MSW.

Table 6-32. Composition Profile of Recovered Non-Metro Residential/ICI Materials

Summer + Fall Sorts Combined

Calculated at a 90% confidence level

		Mean	+/-
Paper		**76.2%**	**4.95%**
	Newsprint	7.5%	2.20%
	High Grade Office Paper	4.5%	0.84%
	Magazines/Catalogs	7.9%	1.95%
	Uncoated OCC	38.5%	4.00%
	Kraft	1.8%	0.45%
	Boxboard	7.5%	1.39%
	Mixed Paper - Recyclable	5.4%	0.79%
	Compostable Paper and 'other' paper	2.6%	0.53%
	Milk and Juice cartons/boxes, coated	0.4%	0.09%
Plastics		**14.3%**	**1.79%**
	#1 PET Bottles/Jars	4.1%	0.84%
	#1 Other PET Containers & Packaging	0.9%	0.19%
	#2 HDPE Bottles/Jars - Clear	1.0%	0.26%
	#2 HDPE Bottles/ Jars - Color	1.3%	0.34%
	#2 Other HDPE Containers & Packaging	0.1%	0.07%
	#6 Expanded Polystyrene Packaging (EPS)	0.2%	0.05%
	#3-#7 Other - All	1.7%	0.26%
	Other Rigid Plastic Products	1.0%	0.30%
	Grocery & Merchandise Bags	0.4%	0.08%
	Trash Bags	0.4%	0.07%
	Commercial & Industrial Film	0.2%	0.03%
	Other Film	2.2%	0.55%
	Remainder/ Composite Plastic	0.9%	0.66%
Glass		**2.8%**	**0.84%**
	Glass Bottles and Jars - clear	1.4%	0.37%
	Glass Bottles and Jars - brown	0.9%	0.36%
	Glass Bottles and Jars - green	0.2%	0.19%
	Glass Bottles and Jars - blue	0.0%	0.00%
	Flat Glass	0.2%	0.48%
	Other Glass	0.1%	0.07%

		Mean	+/-
Misc. Inorganic		**0.3%**	**0.20%**
	Televisions	0.0%	0.00%
	Computer Monitors	0.0%	0.00%
	Computer Equipment/ Peripherals	0.0%	0.00%
	Electronic Equipment	0.1%	0.14%
	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.2%	0.25%
Organics		**1.6%**	**0.40%**
	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1%	0.02%
	Yard Waste - Woody; branch >0.5"	0.0%	0.00%
	Food Scraps	1.1%	0.42%
	Bottom Fines and Dirt	0.3%	0.07%
	Diapers	0.1%	0.06%
	Other Organic	0.0%	0.02%
Metals		**3.6%**	**0.59%**
	Aluminum Beverage Containers	1.3%	0.41%
	Other Aluminum	0.3%	0.24%
	Ferrous containers (bi-metal cans)	1.2%	0.35%
	Aerosol cans	0.1%	0.05%
	Other Ferrous	0.4%	0.28%
	Other Non-Ferrous	0.1%	0.04%
	Other Metal	0.1%	0.05%
Textiles		**0.4%**	**0.16%**
	Carpet and carpet padding	0.0%	0.00%
	Clothing and other textiles	0.4%	0.17%
HHW		**0.1%**	**0.13%**
	Household Hazardous Waste materials	0.1%	0.20%
C&D		**0.7%**	**0.30%**
	Construction and Demolition materials	0.7%	0.48%
Total Percentage		100.0%	

Appendix A
Work Plan

Metro Nashville Waste Stream and Recycling Characterization Study

WORK PLAN

Contracted by:

Metro Nashville Department of Public Works and Tennessee Department of Environment & Conservation

July 2017

Prepared by:

CDM Smith

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Section 1
Overview

1.1 Objective

This document serves as the sampling and sorting plan for the 2017 Metro Nashville Waste Stream Characterization Study. It describes in detail the work required to provide a comprehensive and accurate waste composition of MSW and the state of recycling in the Metro Nashville area.

To develop precise waste composition estimates, CDM Smith Inc. (CDM Smith) will collect samples at two disposal facilities and one materials recovery facility during each sampling season. Five sampling days during July and five sampling days in September 2017 will be dedicated to hand-sorting and characterizing approximately 200 samples of residential and industrial/commercial/institutional (ICI) waste at the Waste Management Antioch Transfer Station and the Republic Services Transfer Station.

Likewise, five sampling days during July and five sampling days in September 2017 will be dedicated to hand-sorting and characterizing approximately 200 samples of residential and ICI single-stream recycling at the Waste Management River Hills Recycling Facility.

Sampling will be approximately split 50/50 between the residential and ICI sectors.

Sampling distribution between Metro trucks and private trucks will be approximately 25% Metro and 75% privates for the MSW sorts and 75% Metro and 25% privates for the recycled materials sorts.

Description and definitions of the waste sectors used to stratify data collection for the study are presented in the following sections. Detailed appendices follow.

1.2 Waste Sectors

This study will examine waste disposed by two distinct sectors:

1. Residential – waste generated by single and multifamily residences. This waste is primarily collected in packer trucks (e.g., side-loading or rear loading vehicles).

2. Industrial/Commercial/Institutional (ICI) – waste generated by fabricated manufacturing facilities, mills, and mines; businesses and institutions. This waste is collected in a variety of vehicles including loose and compactor drop boxes, and front-end loading trucks.

1.3 Facility Selection

Sampling will be conducted at two transfer stations, the Waste Management Antioch Transfer Station and the Republic Services Transfer Station, and one recycling facility, the Waste Management River Hills Facility. Facility listing and addresses are provided in **Appendix A**.

1.4 Coordination with Facilities

Each facility was contacted to prepare for the logistics of sampling. In addition to obtaining contact information for the staff who are able to assist in making arrangements for data collection at each facility, the following information was requested or agreed upon with the facility:

- Written directions to the facility;
- The facility's days and hours of operation, and if they accept waste outside of these hours;
- Contact information for the owner of the facility, an employee who can provide permission to use the site, an on-site contact for logistics information, and a person who will be the point of contact on the day of sampling;
- A plan or agreement about the exact location of sampling and sorting operations at the facility;
- Confirmation of the facility's willingness to make a loader available for sample collection;
- A plan for the cooperation of gatehouse personnel to obtain vehicle net weights and assist in sample identification and collection;
- The number of scale houses at the facility and the process by which vehicles are directed to the scalehouse (e.g., do ICI haulers use a separate gate from cash customers?);
- Approximate daily and weekly load counts by waste sector and total for the facility;
- Estimates regarding the vehicle traffic expected for each sector on each day of the week and the estimated peak time of day for each type of load;
- Specific information about numbers and types of vehicles arriving on weekend days;
- Any rules the facility follows in recording the net weight of vehicles and for recording alternate minimum weights for small vehicles;

Section 2
Data Collection

This section describes the sampling process and includes plans for the collection of data to characterize residential, ICI, and source-separated materials, as well as residential and ICI recyclables.

2.1 Sort Staff

Sorting will be conducted by two teams of six staff each with the following roles:

- (1) Field Manager/Sample Coordinator – leads the team, communicates with facility management, completes gatehouse survey, selects loads for sampling, quality assurance, hand-sorts, conducts visual characterization of source-separated material loads
- (1) Crew Chief – manages hand-sorts, communicates with facility front-loader for sample placement, records sample weight data, quality assurance, hand-sorts.
- (4) Sorting Crew – hand-sort activities only

2.2 Allocation of Waste Samples

The team will collect samples at two solid waste facilities and one MRF. The team will obtain and hand-sort approximately 200 samples of disposed waste, 200 samples of single-stream recycled materials, as shown below.

Table 1. Target Number of Samples

Sector	Number of Samples
Residential MSW	100
ICI MSW	100
Residential Recycle	100
ICI Recycle	100

2.3 Gatehouse Surveys

To determine the sector and origin of incoming loads, CDM Smith will work with the scalehouse operators to conduct gatehouse surveys. These surveys will consist of a simple questionnaire that will ask what sector the waste is generated by (residential or ICI), the community that the waste comes from and the weight of the load. An example form is provided in **Appendix B**. This information will be used in conjunction with the sampling targets in Table 1 to determine which loads are to be sampled.

2.4 Sampling Residential and ICI Waste

This section describes the procedures for selecting vehicles from the residential and ICI sectors, as well as the procedure for obtaining and characterizing samples from selected vehicles.

2.4.1 Obtaining Residential and ICI Waste Loads for Sampling

The samples collected will be allocated among the 14 Metro Nashville subareas as shown in **Figure**. Approximately 10 samples will be collected per facility per day. The samples will be split equally between residential waste and ICI waste.

2.4.1.1 Developing a Procedure to Select Residential and ICI Loads at Each Facility

CDM Smith will determine the approximate number of residential and ICI loads that arrive at each participating facility on each day of the week. These estimates will be used to inform the selection procedure for residential and ICI vehicles (i.e., to determine the intervals at which vehicles are selected for sampling as they arrive at the facility entrances).

Other factors that affect the logistics of vehicle selection at each facility include the number of entrances used by vehicles, the hours of operation, and the peak times for arrival of trucks (if applicable). All of this information will be gathered from each facility and will be used to create a unique *Vehicle Selection Form* for each sampling day, as described in more detail below.

2.4.1.2 Selection and Diversion Loads of Residential and ICI Waste for Sampling

As discussed in Section 2.2, CDM Smith will work with the scalehouse to identify the vehicles that are entering the facility and use that information to apply the vehicle selection procedure to identify and divert vehicles that will be used to provide samples of waste. The first step in this procedure will be to use the following screening criteria to determine whether the vehicle is eligible for sampling:

- The vehicle only contains waste originating from within Davidson County.
- The vehicle carries mostly waste from ICI sources (i.e., it includes minimal waste from residential and C&D sources); or
- The vehicle carries mostly waste from residential sources (i.e., it includes minimal waste from ICI or C&D sources).

The sampling plan is intended to provide waste samples from throughout Davidson County and both USD and GSD areas of Metro Nashville. For vehicles that meet the screening criteria, the Sampling Coordinator, in coordination with the facility's scalehouse operator, will use a systematic selection procedure to identify the vehicles that will provide samples at each facility. The number of samples that can be collected at each facility is limited; therefore, the nth truck approach will be used to provide an unbiased selection of vehicles for sampling. A sampling interval (e.g., every 3rd residential vehicle or every 4th ICI vehicle) will be calculated for each facility and each sampling day, based on sampling quotas and based on the numbers of residential and ICI waste vehicles expected throughout the day.

Figure 1
Nashville Facilities Map

The Sampling Coordinator or scalehouse operator will apply the sampling intervals by "checking off" eligible vehicles on the *Vehicle Selection Form* and directing selected vehicles to the Sorting Crew. An example of a *Vehicle Selection Form* is shown in **Appendix C**.

To calculate vehicle sampling intervals, CDM Smith will divide the total number of available waste sector loads expected to arrive at the facility on a given day by the number of each waste sector

samples needed each day. The resulting number is the sampling interval and determines whether every third vehicle, every sixth vehicle, or every 20th vehicle is selected for sampling. Generally, vehicles will be selected during a six-hour to eight-hour period on each sampling day, such that the sampling period includes the "peak" arrival time for delivery at that facility. On the day of sampling, the sampling intervals may be adjusted at the discretion of the Sampling Coordinator in order to ensure that enough loads can be intercepted during the time available.

When a vehicle is selected for sampling, the Sample Coordinator will record the following information about the vehicle on a sample placard:

- Unique sample number (i.e. RES1or ICI2)
- Source Location
- Date and Time
- Vehicle type
- Hauler
- Truck number
- The Sample Placard will be placed on the vehicle's windshield or dashboard to identify it as a vehicle intended for sampling and the driver directed to the sampling area. Please see **Appendix C** for an example of a Sample Placard.

After the Sampling Coordinator identifies the designated vehicle, the facility forklift operator will be directed to collect a sample and the corresponding Sample Placard. The Crew Chief will instruct the operator as to where place the sample, collect the Sample Placard and record the information from the Sample Placard onto the Sample Characterization Form. The Crew Chief will also note any unusual circumstances associated with the load or the sample.

2.4.2 Obtaining and Sorting Samples from Residential and ICI Waste Loads

Samples will be obtained from selected residential and ICI loads using the same procedure, which is described below.

1. The driver of each selected load will be instructed to tip the load onto the facility floor in an elongated pile. The Sampling Coordinator will instruct the loader operator to capture material from a randomly selected location in the load.
2. The loader operator will select a sample weighing at least 200 pounds from the pile. Material will be placed onto a tarpaulin. If a loader is not available and working conditions are safe to do so, samples will be removed from the pile by hand.
3. Photographs of the sample when it is placed in the sampling area will be taken using a digital camera. The *Sample Placard* that identifies each sample will be positioned so it is visible in each photograph.

All samples of residential and ICI loads will be sorted according to the sorting procedures described below.

The Crew Chief will record composition weights and the information obtained from the *Sample Placard* on the *Hand Sort Characterization Form*, an example of which is shown in **Appendix C**. At the end of each week, copies of the *Hand Sort Characterization Forms* will be made, and the originals kept at CDM Smith's office for data entry.

Samples from residential and ICI sectors will be sorted and weighed as outlined below. The sorting operation will proceed as follows:

- The sample will be selected as outlined in the previous sections.
- The Sampling Coordinator will provide the Crew Chief vehicle information of each sample for the sampling data form via the *Sampling Placard*. Data recorded will include the date, the time, the area where the waste was collected, and any identifying numbers on the truck.
- The sample will be unloaded from a front-end loader bucket (or similar) onto a tarp in the sample storage area near the sorting table.
- Large items (e.g., corrugated cardboard, wood) and bags containing a single waste category (most often yard waste) will be removed from the sample and set aside for weighing, bypassing the sorting table.
- The remainder of the sample will be transferred by increments onto the sorting table, using broad-bladed shovels to transfer loose material.
- Sample sorting will be conducted using a sorting table/box which has a ¼-inch screen overlay.
- Samples will be sorted until the material particle size ranges from ¼ to 2-inch. At that time the Crew Chief will apportion the material to the appropriate material categories. The residual fines that fall through the screen will be included in category 37 - Bottom fines and dirt, unless it can be visually categorized further (e.g. material is primarily food waste, etc.).
- The sample will be sorted into the containers surrounding the sorting table. The Crew Chief will check the containers periodically for accuracy of sorting.
- The containers will be brought to the scale, checked for accuracy of sorting by the Crew Chief, and weighed.
- The container number and weight of the material in each container will be recorded in the appropriate space on the data form.
- Data quality control checks will be implemented which will include a secondary review of all data recorded and checks for missing data, categories without data, suspect weights, tare weights, and total sample weight.

- Once the data form has been checked the containers will be dumped in a designated area for disposal and recycling, if available, by the facility operator.

The containers used in sorting operations have individual tare weights that typically vary no more than 2 percent from their average tare weight; therefore, a representative tare weight will be used. The tare weight will be checked if containers become coated with food or other materials. If the sorted material in a container weighs very little in proportion to the container, the waste will be removed from the container and weighed loose. The equipment used for the field activities is shown in the residential and ICI Hand Sort Equipment List provided below.

2.4.2.1 List of Equipment and Data Forms for Hand-Sorting

A list of equipment for hand-sorting is included below:

- Plastic bins/buckets
- Boots
- Gloves
- Hard hats
- Shovels
- Broom
- Tarps
- Scales
- Sorting tables
- Magnet
- Clipboards
- Hand wipes
- Calculator
- Rain gear
- Safety vests
- First aid kit
- 30-gallon garbage can
- Cell phone or two-way radio
- Field Forms
    - Hand Sort Characterization Form
    - Sample Placards
    - Vehicle Selection and Quota Form

2.4.3 Staffing Plan, Training, and Supervision of Hand-Sorting Crew

The Field Manager is responsible for coordinating with the facility, providing the quotas for sampling, supervising hand-sorting, reviewing data quality on-site, and will also serve as Sampling Coordinator. The field team will consist of a total of six personnel, a Crew Chief, a Sampling Coordinator, and four crew members who will serve as full-time sorters. The Sampling Coordinator is responsible for coordinating with the scale house to select the designated samples, interviewing the vehicle driver, and providing the Crew Chief with the sample information. The Crew Chief is responsible for supervising waste sorting, logging the sample weights, and reviewing data quality on-site. The waste sorters will consist of personnel who have experience sorting waste.

To ensure data quality, the sort team will review the work plan/ health and safety plan, be trained to identify all categories (**Appendix D**), and be trained in all data quality control measures that will be implemented in the field, prior to each period of field work. The team will have a kickoff meeting to train the sorting crew, discuss safety, and teach the proper procedures for sample collection and sorting. Daily meetings will also be held during the sort to revisit the health and safety plan and ensure quality standards are met.

2.5 Health and Safety Plan

The Health and Safety Plan for the Nashville Municipal Solid Waste (MSW) and Recycled Materials Characterization Study is provided in **Appendix E**.

Section 3
Data Management Plan

This section discusses how the sample and survey data will be stored and the analysis method that will be used to determine waste composition profiles for each subsector.

3.1 Data Entry and QA/QC

After the field forms are checked by the Field Manager/ Crew Chief and entered into the required data format, copies of the field forms will be taken to the CDM Smith office where the Project Manager/ task manager will verify that all required data is recorded properly, that the targeted numbers of samples are obtained, and oversee data entry. CDM Smith will provide The Metro Nashville Department of Public Works and TDEC with a summary of sampling activities weekly during the field activities.

The compiled characterization data from individual samples will be entered into an analytical database, from which waste composition estimates will be calculated. In the analytical database, there will be a unique record for each sample of waste that is sorted. Throughout the waste results section, confidence intervals will be calculated at a 90% level of confidence, meaning that we can be 90% sure that the population mean falls within the upper and lower confidence intervals shown.

3.1.1 Calculating Waste Composition Estimates

The following method will be used to estimate the composition of waste belonging to each waste sector or sub-sector. For a given sector (that is, for the samples belonging to the same waste sector within the same geographic subarea), the composition estimate denoted by r_j represents the ratio of the components' weight to the total weight of all the samples in the stratum. It will be derived by summing each component's weight across all of the selected samples belonging to a given stratum and dividing by the sum of the total weight of waste for all of the samples in that stratum, 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

For example, the following simplified scenario involves three samples. For the purposes of this example, only the weights of the component *carpet* are shown.

	Sample 1	Sample 2	Sample 3
Weight (*c*) of carpet	5	3	4
Total Sample Weight (*w*)	80	70	90

$$r_{Carpet} = \sum \frac{5+3+4}{80+70+90} = 0.05$$

To find the composition estimate for the component *carpet*, the weights for that material are added for all selected samples and divided by the total sample weights of those samples. The resulting composition is 0.05, or 5 percent. In other words, 5 percent of the sampled material, by weight, is *carpet*. This finding is then projected onto the stratum being examined in this step of the analysis.

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

$$\mathrm{Var}(r_j) \approx \left(\frac{1}{n}\right)\left(\frac{1}{\overline{w}^2}\right)\left(\frac{\sum_i \left(c_{ij} - r_j w_i\right)^2}{n-1}\right)$$

where:

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

(For more information regarding Equation 2, please refer to Sampling Techniques, 3rd Edition by William G. Cochran [John Wiley & Sons, Inc., 1977].)

Second, precision levels at the 90 percent confidence level will be calculated for a component's mean as follows:

$$r_j \pm \left(z\sqrt{\mathrm{Var}(r_j)}\right)$$

where z = the value of the z-statistic (1.645) corresponding to a 90 percent confidence level.

Composition results for strata will then be combined, using a weighted averaging method, to estimate the composition of larger portions of the waste stream. The relative tonnages associated with each stratum serve as the weighting factors. The calculation will be performed as follows:

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

where:

p = the proportion of tonnage contributed by the noted waste stratum (that is, the weighting factor)

r = ratio of component weight to total waste weight in the noted waste stratum (that is, the composition percent for the given material component)

for j = 1 to m, where m = number of material components

For example, the above equation is illustrated here using three waste strata.

	Stratum 1	Stratum 2	Stratum 3
Ratio (r) of carpet	5%	10%	10%
Tonnage	25,000	100,000	50,000
Proportion of tonnage (*p*)	14.3%	57.1%	28.6%

To estimate the portion of larger portions of the waste stream, the composition results for the three strata are combined as follows.

$$O_{Carpet} = (0.143 * 0.05) + (0.571 * 0.10) + (0.286 * 0.10) = 0.092 = 9.2\%$$

Therefore, 9.2 percent of this examined portion of the waste stream is *carpet*.

The variance of the weighted average will be calculated as follows:

$$\mathrm{Var}(O_j) = \left(p_1^2\ \mathrm{Var}(r_{j1})\right) + \left(p_2^2\ \mathrm{Var}(r_{j2})\right) + \left(p_3^2\ \mathrm{Var}(r_{j3})\right) + \mathrm{K}$$

Appendix A
Facility Information

Republic Services' Transfer Station - 1160 Freightliner Dr, Nashville, TN 37210

Waste Management's Transfer Station – 1428 Antioch Pike, Antioch, TN 37013

Waste Management's Recycling Facility - River Hills at 208 River Hills Drive Nashville, TN 37210

Appendix B
Facility Interview Questionnaire

Each site selected for sampling will be interviewed prior to sorting waste at the facility. The purpose of each site interview is to obtain information for 1) creating sampling intervals and conducting data analysis following the sampling; and 2) arranging on-site logistics (e.g., designating an area for waste sorting).

A copy of the interview form is provided below.

Metro Nashville Municipal Solid Waste (MSW) and Recycled Materials Characterization Study 2017
Facilities Interview

Study background, including:

- Potentially sorting in July and September 2017 - 2 weeks total at the facility.
- We will sort about **10 loads** of waste entering the site per day.

Facility Information

Facility Name _____

Facility Address _____

Owner of facility _____ Phone # _____

On-site Logistics Contact _____ Phone # _____

e-mail address _____

Primary Field Contact _____ Phone # _____

Additional Information _____

_____

1. During a typical week, what is the # of loads you receive?_____
   Total weekly tonnage? _____
2. Does the facility weigh all vehicles? Yes No In not, which vehicles does it weigh?
   a. Can the facility provide actual net weights for every load? If not, what types of loads are estimated?
   b. Will drivers know their net weight by the time they arrive at the tipping floor/face or not until they scale out?
3. How many entrances are there into the facility? Who uses each? (e.g., are commercial accounts different than cash customers?)
4. What time do you begin accepting garbage and what time do you normally close/reach your daily tonnage limit?
   a. Do you have separate hours for commercial haulers? If yes, what are they?
5. Are vehicle net weights printed on customer receipts upon exiting the facility?
   a. Yes No

6. Do you have a space that we can use?

   Space requirements are equivalent to 2-3 truck bays adjacent to the working face/tip area of the facility. Samples will be collected from the working face/tip area so the area should be convenient for sample transport.

7. Can you provide me with a map of the site?

   a. If so, please send to coxca@cdmsmith.com

   b. Please indicate on the map or otherwise let us know where you would like us to set-up at the facility.

8. We would need your assistance in the following: a front-end loader or bobcat and operator who could collect ~10 200-300 lb-samples throughout the day from the tipping floor and transport it to our working area. Is this possible?

9. We would also need to develop a plan for the cooperation of gatehouse personnel to obtain vehicle net weights and selecting samples

   a. Are there any rules that may be used for recording the net weight of vehicles and for recording alternate minimum weights for small vehicles?

   b. Would we be able to have the scale house person assist us in obtaining load specific information through a brief ~ 3 question survey? The purpose of the survey is to determine the distribution of waste between the three categories (see definitions at the end of the survey) and waste source locations.

10. Are there any limits on your facility (i.e. types of waste you receive or accept waste only from certain communities/counties)?

11. Please share any information about existing recycling or recovery operations at the facility and quantities of materials recovered.

    a. Magnitude (tons etc.)?

    b. Materials recycled?

12. Do you have any tips about any unusual conditions (e.g., weather, anomalies in traffic patterns, etc.) that might affect data collection?

13. Can you provide me with written directions and/or a map to the site (such as used for directing tour groups)? Please send to coxca@cdmsmith.com

14. Please complete the following table for waste accepted during a typical week:

Waste Stream Definitions:

- Residential – waste generated by single-family and multiple-family dwellings. This waste is primarily collected in packer trucks (e.g., rear loading vehicles).
- Commercial – waste generated by businesses and institutions. This waste is collected in a variety of vehicles including loose and compactor drop boxes, and front-end loading trucks.

- Industrial – waste generated by industrial activity, such as that of primary and fabricated manufacturing facilities, mills, and mines. Unlike regular MSW which is primarily food, packaging and disposed products, industrial waste is the material disposed from the production of commercial and consumer goods or the treatment and disposal of waste and sewage.
- Source-Separated Recycled Materials – materials recovered for reuse or recycling. This waste is collected in a variety of vehicles and roll-off boxes.
- Construction and demolition (C&D) – waste generated from new construction, renovation activities, or demolition. This waste is collected in vehicles such as dump trucks, loose roll-off boxes, and end dump vehicles.

Please use % or you best guess if total number of trucks is known but number not per category.

	Weekdays		**Weekends**	
	# of trucks	**Peak hours**	**# of trucks**	**Peak hours**
Residential				
Commercial/Institutional				
Industrial				
C&D				
Single-Source Recyclables				
Source-Separated Recyclables				
Total				

15. We will use this information to finalize the facilities that we would like to sample from and we will follow-up to a schedule a day for sampling in the time period outlined above. Please let us know if there are any days that would not work due to vacations, etc.

Thank you for your time!

Appendix C
Field Forms

The field forms for this study are included in the following order:

- Vehicle selection forms (number of loads required per facility, waste sector, and sub-stream)
  - Residential vehicle selection form
  - ICI vehicle selection form
  - Single-stream recyclables vehicle selection form
  - Source-separated vehicle selection form
- Sample identification placards
- Waste Characterization forms
  - Hand Sort Characterization Form
  - Visual Characterization Form

Vehicle Selection and Quota Form – Example

Note: The following form is only an example. When we receive the total numbers of loads expected at each facility, this form will be customized and replicated for each sampling day at a given facility.

Waste Characterization Study
Vehicle Selection Form

Site: 34th Street MRRF

Date: 8/28/2008 **Goal:** 15 **Samples Total**

DSS RESIDENTIAL: (Sample IDs RES 1-15) **NEED** 15 **TOTAL**

**Must be at least 80% residential waste.*

Wards needed today: _____

Each number below represents an expected vehicle based on the available data. If driver answers "yes" to any of the above wards, then cross off one number below for that driver's vehicle as it enters the landfill. When you reach a circled number, give the vehicle a placard and ask the vehicle to go to the sorting area.

(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)

(expect 40)

Sample Placard

«SAMPLE_ID»	
DATE/TIME:	LOCATION:
HAULER:	TRUCK #:
VEHICLE TYPE:	

Waste Characterization Form - Hand Sort

IRA Hand Sort - Waste Characterization Form

Waste Stream: RES ICI | Sample ID: _____ | Location: _____
Total Sample Weight: _____ | Date: _____ | Truck #: _____
Does load contain C&D? Y N | Time: _____ | County/City _____
Photo taken: ☐ | Hauler: _____
Vehicle type: front loader / side loader / rear loader / loose drop box / compacted drop box / other: _____

PAPER	Weight 1	Weight 2	Weight 3
Newsprint			
High Grade Office Paper			
Magazines/Catalogs			
Cardboard/Kraft			
Boxboard			
Mixed Paper - Recyclable			
Compostable Paper			
Other Paper- Nonrecyclable			
BEVERAGE CONTAINERS			
Milk and Juice cartons/Aseptic			
PLASTIC			
#1 PET Bottles/Jars			
#1 Other PET Containers & Packaging			
#2 HDPE Bottles/Jars - Clear			
#2 HDPE Bottles/Jars - Color			
#2 Other HDPE Containers & Packaging			
#6 Styrofoam/Polystyrene Packaging			
#3-#7 Other- All			
Other Rigid Plastic Products			
Grocery & Merchandise Bags			
Trash Bags			
Commercial & Industrial Film			
Other Film			
Remainder/ Composite Plastic			
GLASS			
Recyclable Glass Bottles and Jars			
Flat Glass			
Other Glass			
METAL			
Aluminum Beverage Containers			
Other Aluminum			
HVAC Ducting			
Ferrous containers (tin cans)			
Other Ferrous			
Other Non-Ferrous			
Other Metal			
ORGANIC			
Yard Waste - Compostable			
Yard Waste - Woody			
Food Scraps			
Bottom Fines and Dirt			
Diapers			
Other Organic			

If found please call 312-346-5000. Reward offered.

CONSTRUCTION & DEMOLITION	Weight 1	Weight 2	Weight 3
Clean Dimensional Lumber			
Clean Engineered Wood			
Wood Pallets			
Painted Wood			
Treated Wood			
Concrete			
Reinforced Concrete			
Asphalt Paving			
Rock & Other Aggregates			
Bricks			
Gypsum Board			
Composition Shingles			
Other Roofing			
Plastic C&D materials			
Ceramics/Porcelain			
Other C&D			
INORGANICS			
Televisions			
Computer Monitors			
Computer Equipment/Peripherals			
Electronic Equipment			
White Goods - refrigerated			
White Goods - not refrigerated			
Lead-acid Batteries			
Other Household Batteries			
Tires			
Household Bulky Items			
Fluorescent Lights/Ballasts			
HOUSEHOLD HAZARDOUS			
Latex Paint			
Oil Paint			
Plant/Organism/Pest Control/Grow th			
Used Oil/Filters			
Other Automotive Fluids			
Mercury-Containing Items			
Sharps & Infectious Waste			
Ash, Sludge, & Other Industrial Processed Wastes			
Sewage Solids			
Other HHW			
TEXTILES			
Carpet			
Carpet Padding			
Clothing			
Other Textiles			

CDM Smith

Visual Sort - Waste Characterization Form

Sample ID:_____		Field Supervisor: _____
☐ Labeled & Photographed		Facility Name: _____
Date: _____ Time: _____		Location: _____
Hauler:		Load Weight: _____ pounds or tons
Container Yardage: _____	Percent Full: _____	Load Dump Dimensions: _____ x _____ x _____

	Material Group	% By Volume	% By Volume	Notes
PAPER	Boxboard	☐		
	Compostable Paper			
	High Grade Office Paper			
	Magazines/Catalogs			
	Mixed Paper - Recyclable			
	Newsprint			
	Uncoated OCC/Kraft			
	Other Paper			Subtotal must equal 100%
	Milk and Juice cartons/boxes, coated	☐		
GLASS	Recyclable Glass Bottles and Jars	☐		
	Flat Glass			
	Other Glass			Subtotal must equal 100%
PLASTIC	#1 PET Bottles/Jars	☐		
	#1 Other PET Containers & Packaging			
	#2 HDPE Bottles/Jars - Clear			
	#2 HDPE Bottles/Jars - Color			
	#2 Other HDPE Containers & Packaging			
	#6 Expanded Polystyrene Packaging (EPS)			
	#3-#7 Other - all			
	Other Rigid Plastic Products			
	Grocery & Merchandise Bags			
	Trash Bags			
	Commercial & Industrial Film			
	Other Film			
	Remainder/ Composite Plastic			Subtotal must equal 100%
METAL	Aluminum Beverage Containers	☐		
	Ferrous containers (tin cans)			
	HVAC Ducting			
	Other Aluminum			
	Other Ferrous			
	Other Non-Ferrous			
	Other Metal			Subtotal must equal 100%
ORGANIC	Yard Waste - Compostable	☐		
	Yard Waste - Woody			
	Food Scraps			
	Bottom Fines and Dirt			
	Diapers			
	Other Organic			Subtotal must equal 100%
C&D MATERIALS	Clean Dimensional Lumber	☐		
	Clean Engineered Wood			
	Wood Pallets			
	Painted Wood			
	Treated Wood			
	Concrete			
	Reinforced Concrete			
	Asphalt Paving			
	Rock & Other Aggregates			
	Bricks			
	Gypsum Board			
	Composition Shingles			
	Other Roofing			
	Plastic C&D materials			
	Ceramics/Porcelain			
	Other C&D			Subtotal must equal 100%
INORGANICS	Televisions	☐		
	Computer Monitors			
	Computer Equipment/Peripherals			
	Electronic Equipment			
	White Goods - refrigerated			
	White Goods - not refrigerated			
	Lead-acid Batteries			
	Other Household Batteries			
	Tires			
	Household Bulky Items			
	Fluorescent Lights/Ballasts			Subtotal must equal 100%
HHW	Latex Paint	☐		
	Oil Paint			
	Plant/Organism/Pest Control/Growth			
	Used Oil/Filters			
	Other Automotive Fluids			
	Mercury-Containing Items			
	Sharps & Infectious Waste			
	Ash, Sludge, & Other Industrial Processed Wastes			
	Sewage Solids			
	Other HHW			Subtotal must equal 100%
TEXTILES	Carpet	☐		
	Carpet Padding			
	Clothing			
	Other Textiles			Subtotal must equal 100%
	Total category must equal 100%			
Notes				

Appendix D
Materials List and Definitions

	Material Group			Divertibility	Notes/Examples
PAPER	1		Newsprint	Recoverable	Includes newspaper and glossy inserts, and all items made from newsprint, such as free advertising guides, election guides, plain news packing paper, stapled college schedules of classes, and tax instruction booklets.
	2		High Grade Office Paper	Recoverable	Includes white and pastel bond, rag, or stationary grade paper, with or without ink. Examples include photocopy, laser print, letter paper, computer paper used for computer printouts, notebook or ledger paper, and index cards.
	3		Magazines/Catalogs	Recoverable	Includes magazines and catalogs and other items made of glossy coated paper. This paper is usually slick, smooth to the touch, and reflects light. Does not include phone books.
	4		Uncoated OCC	Recoverable	Includes uncoated cardboard items with a wavy core, without wax coating on the inside or outside. Examples include shipping and moving boxes, computer packaging cartons, sheets and pieces of boxes and cartons. Does not include chipboard.
	5		Kraft	Recoverable	Includes Kraft paper bags (brown grocer store bags), and other Kraft paper.
	6		Boxboard	Recoverable	Includes chipboard not coated with wax, metal, or plastic. Also includes paperboard such as cereal and tissue boxes.
	7		Mixed Paper - Recyclable	Recoverable	Includes all other recyclable papers not elsewhere described. Includes phone books and directories, junk mail, envelopes, brightly colored ledger paper and other dry paper, manila folders, index cards, carbonless forms, and egg cartons. Mixed Recyclable Paper may be combined with minor amounts of other materials such as wax or glues.
	8		Compostable Paper	Compostable	Includes low grade and food contaminated paper which is compostable. Examples include paper towels, paper plates, waxed papers, and tissues.
			Other Paper	Non-recoverable	Includes items made mostly of paper but combined with large amounts of other materials such as wax, plastic, glues, foil, wire, food and moisture. Examples include blueprints, sepia, onion skin, foiled lined fast food wrappers, carbon paper, coated OCC, and photographs.
	9		Milk and Juice cartons/boxes, coated	Recoverable	Includes aseptic packages and polycoated (gable top) cartons.

			Material Group	Divertibility	Notes/Examples
PLASTICS	10		#1 PET Bottles/Jars	Recoverable	Includes clear or colored PET bottles (i.e., narrow neck containers) and jars marked with a #1. May also bear the letters "PETE" or "PET." The color is usually transparent green or clear, and does not turn white when bent. Examples include soft drink bottles, some liquor bottles, and cooking oil containers.
	11		#1 Other PET Containers & Packaging	Potentially Recoverable	Includes PET containers and packaging marked with a #1 and potentially bearing the letters "PETE" or "PET."
	12		#2 HDPE Bottles/Jars - Clear	Recoverable	Includes bottles (i.e., narrow neck containers) and jars marked with #2 that are cloudy white, allowing light to pass through it (natural). Examples include milk jugs, water jugs, some hair-care bottles, and other clear empty fluid containers marked with #2 or "HDPE."
	13		#2 HDPE Bottles/ Jars - Color	Recoverable	Includes bottles (i.e., narrow neck containers) and jars marked with #2 that are a solid color, preventing light from passing through it (pigmented). Examples include detergent bottles, some hair-care bottles, empty motor oil, empty antifreeze, and other empty vehicle and equipment fluid containers marked with #2 or "HDPE."
	14		#2 Other HDPE Containers & Packaging	Potentially Recoverable	Includes HDPE containers and packaging marked with a #2 and potentially bearing the letters "HDPE."
	15		#6 Expanded Polystyrene Packaging (EPS)	Recoverable	Includes formed or sheet expanded polystyrene (EPS) items marked with a PS or a #6, used for packaging and shipping. Examples include items used for food packaging or food service, food trays, egg cartons, packaging peanuts, packaging blocks, and coolers.
	16		#3-#7 Other - All	Potentially Recoverable	Includes bottles, jars, and containers marked #3-#7 or unmarked that are made of types of plastic other than HDPE (high-density polyethylene) or PETE (polyethylene terephthalate). Examples include syrup bottles, salad dressing bottles, clamshells, salad trays, lids, cookie tray inserts, plastic spools, plastic frozen food trays, yogurt cups and lids, margarine tubs, clamshell-shaped fast food containers, shampoo containers, vitamin bottles, and toothpaste tubes. Also includes toxic product containers, such as for oil or antifreeze.

			Material Group	Divertibility	Notes/Examples
PLASTICS	10		#1 PET Bottles/Jars	Recoverable	Includes clear or colored PET bottles (i.e., narrow neck containers) and jars marked with a #1. May also bear the letters "PETE" or "PET." The color is usually transparent green or clear, and does not turn white when bent. Examples include soft drink bottles, some liquor bottles, and cooking oil containers.
	11		#1 Other PET Containers & Packaging	Potentially Recoverable	Includes PET containers and packaging marked with a #1 and potentially bearing the letters "PETE" or "PET."
	12		#2 HDPE Bottles/Jars - Clear	Recoverable	Includes bottles (i.e., narrow neck containers) and jars marked with #2 that are cloudy white, allowing light to pass through it (natural). Examples include milk jugs, water jugs, some hair-care bottles, and other clear empty fluid containers marked with #2 or "HDPE."
	13		#2 HDPE Bottles/ Jars - Color	Recoverable	Includes bottles (i.e., narrow neck containers) and jars marked with #2 that are a solid color, preventing light from passing through it (pigmented). Examples include detergent bottles, some hair-care bottles, empty motor oil, empty antifreeze, and other empty vehicle and equipment fluid containers marked with #2 or "HDPE."
	14		#2 Other HDPE Containers & Packaging	Potentially Recoverable	Includes HDPE containers and packaging marked with a #2 and potentially bearing the letters "HDPE."
	15		#6 Expanded Polystyrene Packaging (EPS)	Recoverable	Includes formed or sheet expanded polystyrene (EPS) items marked with a PS or a #6, used for packaging and shipping. Examples include items used for food packaging or food service, food trays, egg cartons, packaging peanuts, packaging blocks, and coolers.
	16		#3-#7 Other - All	Potentially Recoverable	Includes bottles, jars, and containers marked #3-#7 or unmarked that are made of types of plastic other than HDPE (high-density polyethylene) or PETE (polyethylene terephthalate). Examples include syrup bottles, salad dressing bottles, clamshells, salad trays, lids, cookie tray inserts, plastic spools, plastic frozen food trays, yogurt cups and lids, margarine tubs, clamshell-shaped fast food containers, shampoo containers, vitamin bottles, and toothpaste tubes. Also includes toxic product containers, such as for oil or antifreeze.

	Material Group			Divertibility	Notes/Examples
PLASTICS	17		Other Rigid Plastic Products	Potentially Recoverable	Includes plastic items other than containers, film plastic, HDPE buckets, or #3-#7 buckets that are often made to last for more than one use. These items may bear the numbers 3 through 7 in the triangular recycling symbol. Examples include plastic outdoor furniture, plastic toys and sporting goods, CDs, and plastic house wares, such as mop buckets, dishes, cups, cutlery, fan blades, impact-resistant cases such as tool boxes and first aid boxes, and HDPE 5 gallon buckets.
	18		Grocery & Merchandise Bags	Recoverable	Includes labeled grocery and merchandise, dry cleaner, and newspaper polyethylene film bags that were not contaminated with food, liquid or grit during use.
	19		Trash Bags	Non-recoverable	Includes polyethylene film bags that were used to contain garbage such as black or transparent trash bags.
	20		Commercial & Industrial Film	Recoverable	Includes film plastic used for large-scale packaging or transport packaging, such as industrial film, wrappings, plastic strapping, other thin flexible plastic packaging, plastic sheeting, and shrink wrap.
	21		Other Film	Non-recoverable	Includes film packaging not defined above, such as film that is woven together (e.g., grain bags); contains multiple layers of film or other materials that have been fused together (e.g., potato chip bags); is used to contain food or liquid (e.g., produce and bread bags); plastic sheeting; photographic negatives; and shower curtains.
	22		Remainder/ Composite Plastic	Non-recoverable	Includes plastic items not elsewhere classified, as well as items made mostly of plastic but combined with other materials. Examples include disposable razors, pens, lighters, 3-ring binders, auto parts made of plastic attached to metal, plastic outdoor furniture, and other objects that contain more than 50% plastic, etc.

	Material Group			Divertibility	Notes/Examples
GLASS	23		Glass Bottles and Jars - **clear**	Recoverable	Includes glass bottles and jars containing beverages, food, or consumable liquids. Examples include whole or broken clear or colored soda, beer bottles, fruit juice bottles, peanut butter jars, mayonnaise jars, wine bottles, cosmetic jars and non prescription medical bottles.
	24		Glass Bottles and Jars - **brown**	Recoverable	
	25		Glass Bottles and Jars - **green**	Recoverable	
	26		Glass Bottles and Jars - **blue**	Recoverable	
	27		Flat Glass	Potentially Recoverable	Includes clear or tinted glass that is flat, such as glass window panes, doors, table tops, flat automotive window glass (side windows), safety glass, and architectural glass. This category does not include windshields, laminated glass, or any curved glass.
	28		Other Glass	Non-recoverable	Includes glass that cannot be put in any other type or subtype. It includes items made mostly of glass but combined with other materials, such as Pyrex, crystal and other glass tableware, auto windshields, and incandescent light bulbs.
ORGANICS	29		Yard Waste - Compostable	Compostable	Includes leaves, grass clippings, garden debris, pruning, shrubs, and small branches up to 0.5 inches in diameter from any public or private landscapes.
	30		Yard Waste - Woody	Compostable	Includes vegetative woody plant material, branches, shrubs, and stumps that exceed 0.5 inches in diameter from any public or private landscape.
	31		Food Scraps	Compostable	Includes food material capable of being composted (including scrap animal parts). This type includes materials resulting from the processing, storage, preparation, cooking, handling or consumption of food and material from industrial, commercial or residential sources. Examples include discarded meat scraps, dairy products, egg shells, fruit or vegetable peels, and other food items from homes, stores, and restaurants. This type includes grape pomace and other processed residues or material from canneries, wineries, or other industrial sources.
	32		Bottom Fines and Dirt	Non-recoverable	Includes fragments that pass through 1/4 inch screen. Examples include mixed residue, sand, soil, clay, and dirt.
	33		Diapers	Non-recoverable	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.
	34		Other Organic	Non-recoverable	Includes organic material that cannot be put in any other category such as items made mostly of organic materials but combined with other materials. Examples include cork, hemp rope, rubber/vinyl garden hoses, hair, cigarette butts, full vacuum bags, sawdust, and animal feces.

			Material Group	Divertibility	Notes/Examples
METALS	35		Aluminum Beverage Containers	Recoverable	Includes any food or beverage container made mainly of aluminum, such as aluminum soda or beer cans and some pet food cans. This does not include bimetal containers with steel sides and aluminum ends.
	36		Other Aluminum	Potentially Recoverable	Includes items such as aluminum foil, pie plates, trays.
	37		Ferrous containers (tin cans)	Recoverable	Includes rigid containers made mainly of steel, such as items that will stick to a magnet and may be tin-coated. This subtype is used to store food, beverages, paint, and a variety of other household and consumer products. Examples include canned food and beverage containers and bimetal containers with steel sides and aluminum ends.
	38		Aerosol cans	Recoverable	Includes empty metal paint cans, empty spray paint and other aerosol containers.
	39		Other Ferrous	Recoverable	Includes iron or steel that is magnetic or any stainless steel item, other than ferrous/bimetal cans. Examples include structural steel beams, boilers, metal clothes hangers, metal pipes, rebar, stainless steel cookware, security bars, scrap ferrous items, and galvanized items such as nails and flashing.
	40		Other Non-Ferrous	Recoverable	Includes any metal item, other than aluminum cans, that is not magnetic. These items may be made of copper, brass, aluminum, bronze, lead, zinc, or other metals. Examples include aluminum window frames, aluminum siding, aluminum furniture, copper wire, shell casings, brass pipe, and aluminum foil.
	41		Other Metal	Non-recoverable	Includes metal that cannot be put in any other category. This category includes items made mostly of metal but combined with other materials and items made of both ferrous metals and non-ferrous metal combined. Examples include HVAC ducting, small non-electronic appliances such as toasters and hair dryers, motors, insulated wire, and finished products that contain a mixture of metals, or metals and other materials, whose weight is derived significantly from the metal portion of its construction.
TEXTILES	42		Carpet	Potentially Recoverable	Includes material consisting mainly of carpet flooring applications consisting of various natural or synthetic fibers bonded to some type of backing material.
			Carpet Padding	Potentially Recoverable	Includes plastic, foam, felt, and other materials used under carpet to provide insulation and padding.
	43		Clothing	Potentially Recoverable	Includes items made of thread, yarn, fabric, cloth, clothes, natural and synthetic cloth fibers, and leather clothing goods.
			Other Textiles	Non-recoverable	Includes drapes, curtains, bedding, blankets, upholstery, shoes, and other products comprised mostly of textiles and leather.

Material Group				Divertibility	Notes/Examples
C & D	44		Clean Dimensional Lumber	Recoverable	Includes unpainted, non-treated processed wood for building, manufacturing, landscaping, packaging, and from demolition. Examples include dimensional lumber, lumber cutoffs, wood scraps, and wood siding, materials such as 2 x 4s, 2 x 6s, 2 x 12s, and other residual materials from framing and related construction activities. May contain nails or other trace contaminants.
			Clean Engineered Wood	Recoverable	Includes unpainted, non-treated wood such as sheeted goods like plywood, particleboard, wafer board, oriented strand board, and other residual materials used for sheathing and related construction uses. May contain nails or other trace contaminants.
			Wood Pallets	Recoverable	Includes unpainted wood pallets, crates, and packaging made of lumber/engineered wood.
			Painted Wood	Non-recoverable	Includes wood that has been painted or stained like handrails or finished furniture. May contain nails or other contaminants.
			Treated Wood	Non-recoverable	Includes wood that has been treated with a chemical preservative for purposes of protecting the wood against attacks from insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood. Examples include wood that has been pressure treated, chemically treated (with copper, etc.) or treated with creosote (e.g. railroad ties, marine timbers and pilings, landscape timbers, and telephone poles).
			Concrete	Recoverable	Includes materials made of concrete, a hard material made from sand, gravel, aggregate, cement mix, and water. Examples include pieces of building foundations, concrete paving, cinder blocks, and man-made paving stones.
			Reinforced Concrete	Potentially Recoverable	Includes concrete with a steel internal structure composed of reinforcing bars (re-bar) or metal mesh.
			Asphalt Paving	Recoverable	Includes black or brown, tar-like material mixed with aggregate used as a paving material.
			Rock & Other Aggregates		Includes aggregates (other than concrete and asphalt paving) such as masonry tile, clay roofing tiles, rock, stones, and materials made of rock.

Material Group				Divertibility	Notes/Examples
C & D	44		Bricks	Potentially Recoverable	Includes bricks and materials made of bricks.
			Gypsum Board	Potentially Recoverable	Includes gypsum interior wall covering made of a sheet of gypsum sandwiched between paper layers. This category includes used or unused, broken or whole sheets. Gypsum board may also be called sheetrock, drywall, plasterboard, gypboard, gyproc, or wallboard.
			Composition Shingles	Potentially Recoverable	Includes composite shingles composed of fiberglass or organic felts saturated with asphalt and covered with inert aggregates as well as attached roofing tar and tar paper. Does not include built-up roofing. Commonly known as three tab roofing. Examples include asphalt shingles and attached roofing tar and tar paper.
			Other Roofing	Potentially Recoverable	Includes 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. Commonly known as built-up roofing.
			Plastic C&D materials	Potentially Recoverable	Includes plastics such as piping, siding, drainage, and windows.
			Ceramics/Porcelain	Potentially Recoverable	Includes inorganic non-metallic materials which are formed by the action of heat. Examples include clay pottery, tiles, stoneware, dishes, toilets, and other cement glasses.
			Other C&D	Non-recoverable	Includes construction and demolition material that cannot be put in any other type or subtype. This type may include items from different categories combined, which would be very hard to separate, such as metal sinks, fiberglass insulation, linoleum, nails, and cabinets.

	Material Group			Divertibility	Notes/Examples
MISC INORGANICS	45		Televisions	Recoverable	Includes televisions.
	46		Computer Monitors	Recoverable	Includes computer monitors containing a cathode ray tube (CRT), including oscilloscopes. Does not include laptops and LCD monitors.
	47		Computer Equipment/ Peripherals	Recoverable	Includes keyboards, printers, modems, etc.
	48		Electronic Equipment	Recoverable	Means large and small electronic goods that have circuitry. Examples include microwaves, stereos, VCRs, DVD players, radios, audio/visual equipment, and non-CRT televisions (such as LCD televisions); computer related electronics such as processors, mice, keyboards, laptops, disk drives, printers, modems, and fax machines; and other small consumer goods such as personal digital assistants (PDAs), cell phones, phone systems, phone answering machines, computer games and other electronic toys, portable CD players, camcorders, and digital cameras.
	49		White Goods - refrigerated	Recoverable	Includes goods made mostly of metal but combined with other materials and items made of both ferrous and non-ferrous metals combined. Examples include large appliances such as refrigerators, freezers, and dehumidifiers.
			White Goods - not refrigerated	Recoverable	Includes goods made mostly of metal but combined with other materials and items made of both ferrous and non-ferrous metals combined. Examples include large appliances and parts thereof such as stoves, washers, dryers, and water heaters; as well as small appliances such as fans, irons, and hair dryers.
			Lead-acid Batteries	Recoverable	Includes batteries with liquid acid and lead cells, such as car, truck, lawn mower, and other batteries used to store power.
			Other Household Batteries	Non-recoverable	Includes any type of dry cell battery, such as flashlight, small appliance, watch, cell phone, and hearing aid batteries.
			Tires	Recoverable	Includes whole tires from automobiles, trucks, motorcycles, bicycles, wagons, and other transport vehicles.
			Household Bulky Items	Potentially Recoverable	Includes multi-material furniture items such as couches, chairs, hutches, tables, entertainment centers, fragments of furniture items, and mattresses (fabric coated framed or unframed wire coil bulky item used for sleeping).
			Fluorescent Lights/Ballasts	Recoverable	Includes a lamp tube that is able to be screwed or plugged in to a lamp or over head light that produces visible light by fluorescence, especially a glass tube whose inner wall is coated with a material that fluoresces when an electrical current causes a vapor within the tube to discharge electrons. Includes fluorescent lights, ballasts, and compact fluorescent bulbs (CFL).

Material Group				Divertibility	Notes/Examples
HHW	50		Latex Paint	Recoverable	Includes wet water-based paints and similar products.
			Oil Paint	Non-recoverable	Includes wet and dry solvent-based paints, varnishes, and similar products.
			Plant/Organism/Pest Control/Growth	Non-recoverable	Includes a variety of chemicals such as fertilizers to encourage growth; herbicides and pesticides whose purpose is to discourage pests, weeds, or microorganisms; and fungicides and wood preservatives, such as pentachlorophenol.
			Used Oil/Filters	Recoverable	Includes used lubricating oils, primarily used in cars but including other types with similar characteristics and oil filters.
			Other Automotive Fluids	Non-recoverable	Includes automobile and other antifreeze mixtures based on ethylene or propylene glycol. Also includes brake and other automotive fluids, such as antifreeze, brake fluid, windshield wiper fluid, gasoline, and diesel fuel. Does not include motor oil.
			Mercury-Containing Items	Non-recoverable	Includes barometers, thermostat switches, thermometer. Does not include electrical ballasts.
			Sharps & Infectious Waste	Non-recoverable	Includes any prescription medications and sharp objects used for medical procedures such as needles.
			Ash, Sludge, & Other Industrial Processed Wastes	Non-recoverable	Includes material remaining after the combustion process, present in the waste stream as ash from fireplaces and wood stoves, used charcoal from grills. Also includes sludge and other industrial processed wastewater or treatment wastes.
			Sewage Solids	Non-recoverable	Includes residuals from the sewage treatment process.
			Other HHW	Non-recoverable	Includes any household hazardous material (HHW) that cannot be put in the other HHW subtypes. This type also includes HHW that is mixed, such as waste which if improperly put in the solid waste stream may present handling problems or other hazards. Additional examples include cleaners and corrosives (various acids and bases whose primary purpose is to clean surfaces, unclog drains, or perform other actions) and 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, and alcohols such as methanol and isopropanol).

Appendix E
Health and Safety Plan

STANDARD HEALTH & SAFETY PLAN
for
FIELD SAMPLING AND SORTING FOR
SOLID WASTE CHARACTERIZATION ANALYSIS

CDM Smith
125 S. Wacker Drive, Suite 700
Chicago, IL 60606
312-346-5000

EMERGENCY CONTACT: Paul Opem
303-383-2483
732-539-8128 (24 hour)

1. A copy of this Health and Safety Plan must be kept on site during the entire sampling and sorting event.

2. All field sampling and sorting staff must complete two copies of the emergency contact form, Appendix A to this Plan. One copy of the emergency contact form for each staff person must be attached to this Plan and kept on site during the entire sampling and sorting event. The second copy of the form must be left with the CDM Smith emergency contact staff at the local CDM Smith office.

3. The following information, for each field site, must be completed prior to beginning the sampling and sorting event.

Name of Project	Metro Nashville Solid Waste Management Plan	
Client/No:	Nashville Public Works	Project No. 220720
Fire Dept. Phone Number:	911	
Ambulance Phone Number:	911	
Police Phone Number:	911	
Nearest Hospital and Directions:	See **Appendix B**	
CDM Smith Field Supervisor:	Catherine Cox	312-523-9258
CDM Smith Nashville Contact:	Zack Daniel	615-340-6539
CDM Smith Emergency Contact:	Paul Opem	303-383-2483
CDM Smith 24-Hr. Injury Medical Support (IMS), Non-Emergency Advisory Services:		800-350-4511, Press 1
CDM Smith Nashville Office Phone:		615-320-3161

HEALTH & SAFETY PLAN
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HEALTH & SAFETY PLAN

FIELD SAMPLING AND SORTING FOR SOLID WASTE CHARACTERIZATION ANALYSIS

1.0 INTRODUCTION

The health and safety of field workers is a primary concern of CDM Smith. This document was developed to present guidelines for personal safety during solid waste characterization studies (also known as "trash sorts") at solid waste management facilities. This document will be reviewed by CDM Smith staff responsible for the field sampling and sorting events and the Field Supervisor. The guidelines in this document will be reviewed during the safety and training session required of all field staff. This document is not intended for sites containing hazardous or toxic wastes regulated under federal or state laws.

2.0 OVERVIEW OF FIELD SAMPLING AND SORTING SAFETY

CDM Smith is committed to implement all reasonable precautions to:

- eliminate or reduce the potential for body contact with solid waste and airborne or "flying" waste;
- anticipate potential threats to field worker safety;
- permit visual observation of the solid waste prior to handling or sorting;
- provide adequate information and training to enable field workers and CDM Smith supervisory staff to perform the sampling and sorting in a safe and responsible manner; and,
- provide procedures for responding to emergencies.

3.0 REDUCING THE POTENTIAL FOR BODY CONTACT

Due to the presence of bacteria, sharps, and other potentially dangerous materials in solid waste, the following precautions and procedures will be followed by all field workers during all solid waste sampling and sorting events. These are intended to minimize field workers coming in contact with solid waste and airborne solids.

3.1 Site Orientation

CDM Smith's Field Supervisor will participate in a site orientation provided by a representative from each facility to identify site hazards, work zones, restrooms, emergency procedures, evacuation route and gathering area, and any additional safety procedures

required by the facility. The Field Supervisor will communicate this information to the sampling and sorting staff daily.

3.2 Clothing

Personal Clothing: All field workers are to wear ankle length pants; socks; sturdy boots or shoes with reinforced toes, and long sleeved shirts. No sandals or canvas shoes without safety toe caps will be worn during sampling and sorting.

Safety Clothing: CDM Smith will supply the safety equipment described below:

- dust masks (optional),
- hard hats,
- safety glasses,
- safety vests,
- disposable or other coveralls,
- disposable latex gloves, and
- puncture-resistant outer gloves

Sturdy boots or shoes with reinforced toes are required for all personnel working at the facility. The hard hats and safety vests will be brightly colored to increase visibility of workers in the sampling and sorting areas. Safety vests and hard hats must be worn at all times. Disposable latex inner gloves are provided to reduce contact between hands and dirty outer gloves during removal. Low-resistance respiratory protection (dust masks) will be provided if conditions cause waste material to become airborne. It is not anticipated that conditions shall cause material to become airborne, but if so other controls will be evaluated prior to implementing use of dust masks.

Where facilities provide superior puncture/chemical resistant gloves, such as Hexarmor 9014, CDM Smith's Field Supervisor will inspect them for wear and tear as well as defect before offering them as alternate gloves to sort staff.

3.3 Hand-to-Mouth Contact

No eating, smoking, drinking, or application of cosmetics will be permitted during the sampling or sorting. To reduce hand to mouth contact, chewing gum and chewing tobacco are also restricted. The crew may do these things on breaks after washing their hands and, if required by the field supervisor, their faces.

Fresh water for drinking and hand washing will be kept at the site at all times. Breaks will be taken regularly as indicated by weather conditions. Gloves will be removed before pouring or drinking water.

3.4 Accidental Exposure to Waste

No crew will handle any solid waste without gloves. Accidental skin contact with waste will require cleansing with soap and water. A wash-up station will be available at the site.

All crew members must have had a tetanus shot within 6 years. If necessary, CDM Smith will cover the cost of the shot for all field workers prior to beginning the field work.

Permanent CDM Smith employees who participate in sampling and sorting activities must complete a 6-month hepatitis B vaccination program before or during the sorting program. Similarly, temporary employees will be encouraged to get the hepatitis B vaccination. Per diem employee who don't participate in the vaccination and may have been exposed to bloodborne pathogens during sampling or sorting (for example, by being pricked by a hypodermic needle) must be offered an HB-Ig immunization immediately. If the employee refuses immunization, he or she must sign a form to that effect before resuming sampling or sorting work.

4.0 ANTICIPATION OF POTENTIAL THREATS

Working in an active solid waste management facility presents a variety of potential dangers. The following procedures are intended to improve field worker safety.

4.1 Heat Stress

Sampling and sorting will be conducted under cover, where available, however conditions may have limited ventilation and work could occur during higher temperatures. Fresh water will be available at all times. An ice chest with cold, wet towels will be available at the sorting site. Vehicles with air conditioning will be utilized for breaks, if needed. Any field worker exhibiting signs of heat cramps or heat exhaustion will be immediately required to take a break and will be monitored until symptoms are gone.

4.1 Crew Visibility

The CDM Smith field supervisor and the facility supervisor will jointly agree on the sorting site. The sorting site is located in an area out of the routes taken by waste hauling vehicles and facility equipment. Regardless of task, sorter or sampler, all field workers will wear steel toe boots, brightly colored hard hats and high-visibility vests when on the tipping floor.

4.2 Crew Behavior

As a condition of employment, crew members will observe the following rules for site behavior.

- All field workers will complete the CDM Smith solid waste sampling and sorting safety training.
- No field workers may work under the influence of recreational drugs or alcohol.
- All field workers will wear personal and safety clothing as described in Section 3.1 above.
- No throwing or tossing of waste towards a person will be permitted during the sampling or sorting. Personnel may place waste within the volume of the sorting table towards the crew member closest to the appropriate collection barrel.

4.3 Rejecting a Sample

The field supervisor will be responsible for determining if samples are potentially hazardous. Samples will be rejected if they: contain potentially infectious hospital or medical waste; are soaked in a liquid other than water; contain unidentifiable contents; contain hazardous waste or materials posing a safety hazard; or have an unusual odor not like other solid waste. If such a load is identified, it will be reported to the facility supervisor for removal from the sorting area.

4.4 Evacuation

The field supervisor will determine routes for evacuation from the site and describe them to the work force at the initial site safety meeting. The field supervisor will be responsible for determining if circumstances warrant evacuation of the site.

4.5 Ergonomics Issues

The sorting will occur on a sorting table that holds the waste at a height between 33" and 40". This table should have sturdy support and sides (between 3" and 12" high) to reduce spillage.

If a crew member determines that a trash container is too heavy for one person to lift comfortably (this often happens with containers of food waste), another crew member should help with the lift. Any items weighing over 50 pounds require the individual to obtain assistance.

5.0 VISUAL OBSERVATION OF WASTE

To reduce the potential for cuts or puncture wounds, all waste will be spread out and viewed prior to handling or sorting. The selected waste sample will be extracted or loosened from a truckload at the site via a front end loader or similar machine. It will be transported to the sorting area and deposited on a tarp or a paved surface. Sampling and sorting personnel will inform the field supervisor of any potentially dangerous materials observed in the sample.

Bags will be carefully lifted to the sorting table and cut open. Loose waste from the sample will be put onto the sorting table with a shovel. The crew will spread the waste out with hand tools such as gardening trowels or hand hoes so that contents can be visually examined prior to handling.

No crew member will pick up an armload of waste. No crew member will grasp or "hug" an unopened bag of waste. Such bags may be grasped only at the knot or the free edges.

6.0 STAFF TRAINING

Understanding the procedures necessary to promote safety, and knowing how to respond to an emergency before it happens, are essential to ensuring worker safety. All field staff will participate in a waste characterization training prior to beginning the sampling or sorting. The training will be held as close as possible to the actual field work and may take place during the first part of the day the sampling and sorting begins. The training session will require approximately 30-60 minutes.

6.1 Training Session

Training for field workers will include:

- Introduction
  - purpose for waste characterization study
  - intended use
  - method of compensation (if using outside help)
  - dates of sorting and rain dates (if planned)
  - supervisory responsibility at site

- Sampling and Sorting Procedures

- Health and Safety Plan (specifics described in this plan)

6.2 Responsible Individual/CDM Smith Field Supervisor

Safety during the field work is the responsibility of the CDM Smith Field Supervisor. The supervisor must have previous solid waste sampling and sorting experience. The Supervisor will make project level decisions regarding compliance with this Health and Safety Plan during field operations. The Supervisor may temporarily suspend work if there appears to be a threat to health and safety. The Supervisor, or one crew member, will have a current Red Cross First Aid Certificate. An individual who has a current First Aid Certificate will act as the project safety coordinator.
The Field Supervisor will work with project safety coordinator to:

- Ensure that appropriate personal protective equipment is available and properly utilized by all field staff during the sampling and sorting activities;

- Ensure that field staff are familiar with the Health and Safety Plan and trained in the work practices necessary for safe and efficient data collection;

- Ensure that field staff are aware of potential hazards associated with site operations, such as broken glass, heavy equipment, etc.; and,

- Be responsible for correcting any work practices or conditions that may result in injury to personnel or exposure to hazardous substances.

7.0 EMERGENCY PROCEDURES

Most solid waste management facilities have safety plans and procedures for the site. Prior to beginning the sampling and sorting event, the facility supervisor will be contacted to deliver site specific safety procedures. CDM Smith staff will follow the existing procedure for handling an emergency on site. In addition, the following CDM Smith emergency procedures will be followed.

For the purpose of this plan, an emergency is a situation or condition which could require temporary suspension of field work. This includes but is not limited to: adverse weather conditions, fires, accidents or injuries to field staff, and discovery of waste samples that contain materials which are potentially hazardous.

In the event of a site emergency, such as a fire or release of hazardous chemicals, the facility's safety coordinator or the field supervisor will instruct the crew to leave the area by the pre-planned evacuation route. In general, CDM Smith personnel will not participate in efforts to control facility emergencies.

7.1 Responsible Party

The Field Supervisor is responsible for deciding whether a situation or condition is an emergency. The Supervisor is responsible for deciding whether the situation requires evacuation, on-site medical attention, adjustments in procedures, or off-site medical attention.

7.2 Safety Equipment on Site

The safety equipment listed in Table 7-1 will be kept on site throughout the sampling and sorting. Plans to maintain less equipment than the table describes must be approved by the divisional health and safety coordinator.

7.3 Onsite Treatment

Minor injuries such as cuts, scrapes, and the initial stages of heat exposure, will be treated on site by the Safety Coordinator or Field Supervisor who is trained in First Aid.

7.4 Offsite and Professional Medical Treatment

Unless the injury definitely requires first-aid only, the Field Supervisor will seek professional medical assistance. If such an injury occurs the following procedure will be followed.

- Immediate emergency first aid treatment will be given at the site.
- Contact 24-Hr. IMS for First Aid/Non-Emergency Medical Services at 800-350-4511, Press 1:
    - 1. Call AllOne Health at 1.800.350.4511, PRESS 1, and tell them you are reporting an injury for CDM Smith. Supply requested information.
    - 2. Follow AllOne Health instructions (e.g., first aid, go to clinic, etc.).
    - 3. After care, follow-up with AllOne at the 1-800 #.
- CDM Smith's project health and safety coordinator will notify the appropriate agencies listed in Appendix B.
- If necessary, the injured party will be transported immediately to the nearest emergency facility as identified on the front cover of this Plan.
- The supervisor or a member of the sort crew as designated by the Field Supervisor will call the emergency facility to inform them of the injury and that personnel are approaching for treatment.
- The CDM Smith staff emergency contact will be called and asked to contact the person, on the emergency contact form (Appendix A), identified by the injured party, to be called in case of an emergency. The CDM Smith emergency contact is a designated individual or individuals at the local CDM Smith office who is available during the sampling and sorting event to receive and make emergency phone calls for the sorting crew.
- If the injury was the result of a cut or puncture from a sharp or needle, the item will be retrieved and placed in a zip-lock plastic bag for further examination or testing.
- A report explaining the incident will be submitted to all interested parties including but not limited to: CDM Smith client officer, CDM Smith health and safety group, CDM Smith client contracting for the sampling and sorting, facility owner, and the injured party. Accident reports will be filled out where necessary.

NOTE: If the supervisor must leave the site, all field staff will stop work until a responsible CDM Smith substitute can arrive to supervise the sampling and sorting.

Table 7-1
Equipment for Solid Waste Characterization Sampling and Sorting

Required Personal Protective Equipment:
Dust masks (user's option)
Hard hats
Coveralls (cloth or disposable) (user's option)
Safety vests
Safety glasses
Disposable undergloves
Overgloves, puncture resistant
Field boots with safety toes

Site Safety Equipment:

Copy of Health and Safety Plan with cover sheet completed
Copy of Emergency Contact Form for each field worker
First Aid Kit containing at a minimum:
  eye wash, compresses, antiseptic wipes and spray, band-aids, gauze, tape, tweezers;
Vehicle to permit immediate site evacuation
Clean water and cups for drinking
Clean water, wipes and antibacterial soap for washing
Ice chest with cold water towels (to be wetted for heat stress conditions)
Zip-lock plastic bags
Paper towels, rags, or tissues
Portable phone (if the sort area has no permanent phone)

Sampling and Sorting Equipment:
Sorting table
Sorting buckets/pails/tubs
Shovels, hoes, gardening hand tools
Broom

APPENDIX A
Site Location and Contact Information

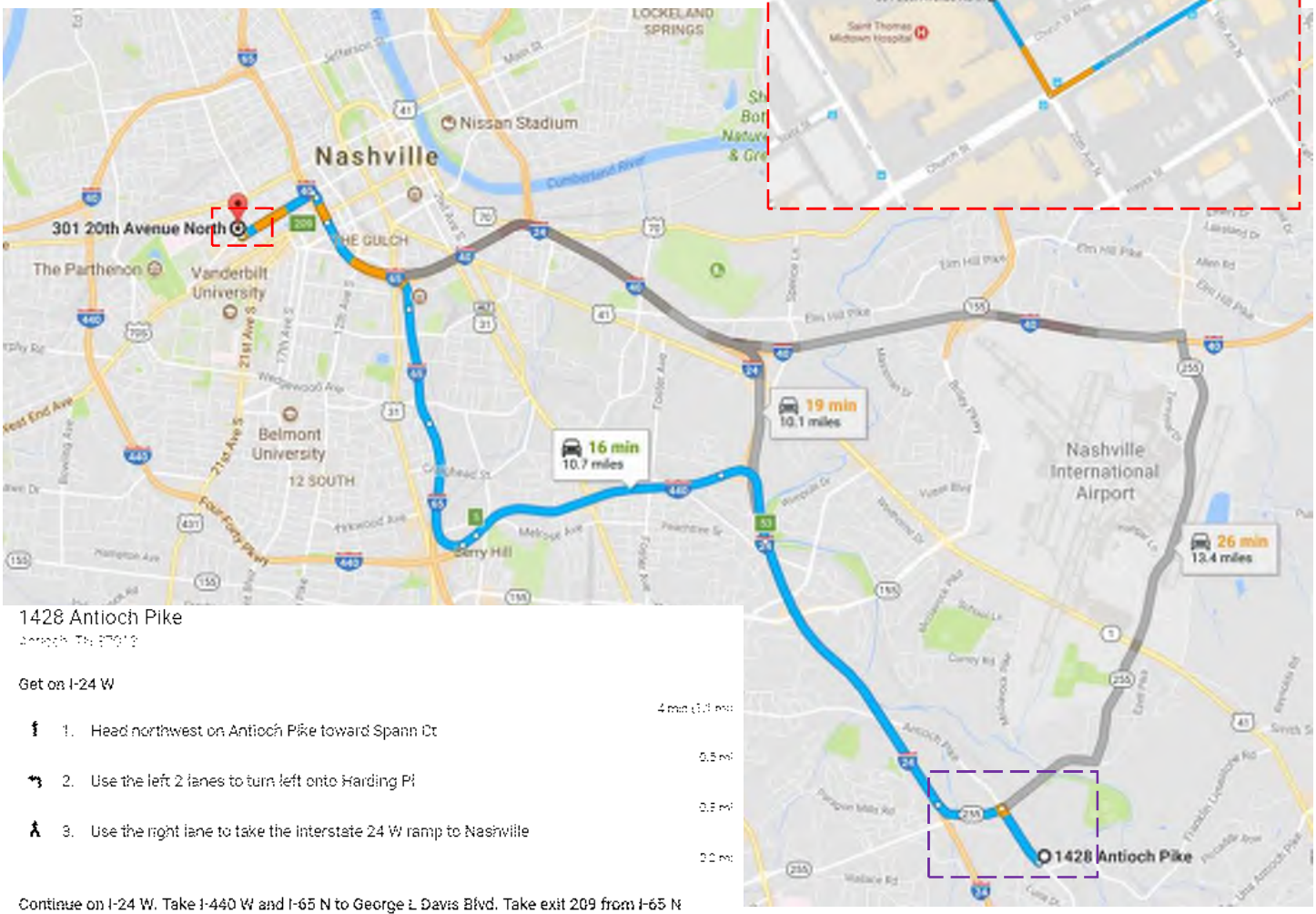
Update with Selected Facility Info

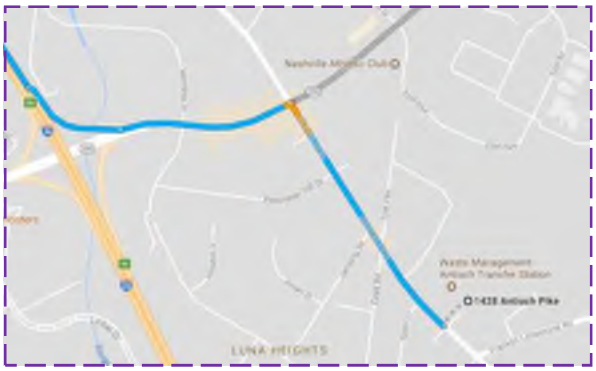
APPENDIX B
Nearest Hospital and Driving Directions

HOSPITAL:

Saint Thomas Midtown Hospital at 301 20th Street N, Nashville, TN 37203

Antioch TS





1428 Antioch Pike

Get on I-24 W

1. Head northwest on Antioch Pike toward Spann Ct
2. Use the left 2 lanes to turn left onto Harding Pl
3. Use the right lane to take the Interstate 24 W ramp to Nashville

Continue on I-24 W. Take I-440 W and I-65 N to George L Davis Blvd. Take exit 209 from I-65 N

4. Merge onto I-24 W
5. Use the right 2 lanes to take exit 53 for I-440 W toward Memphis
6. Continue onto I-440 W
7. Use the right lane to take exit 5 for I-65 S/I-65 N toward Huntsville/Nashville
8. Keep right at the fork, follow signs for Interstate 65 N/Nashville and merge onto I-65 N
9. Keep left to stay on I-65 N
10. Keep left to stay on I-65 N, follow signs for I-40 W/Memphis/Louisville
11. Take exit 209 to merge onto George L Davis Blvd

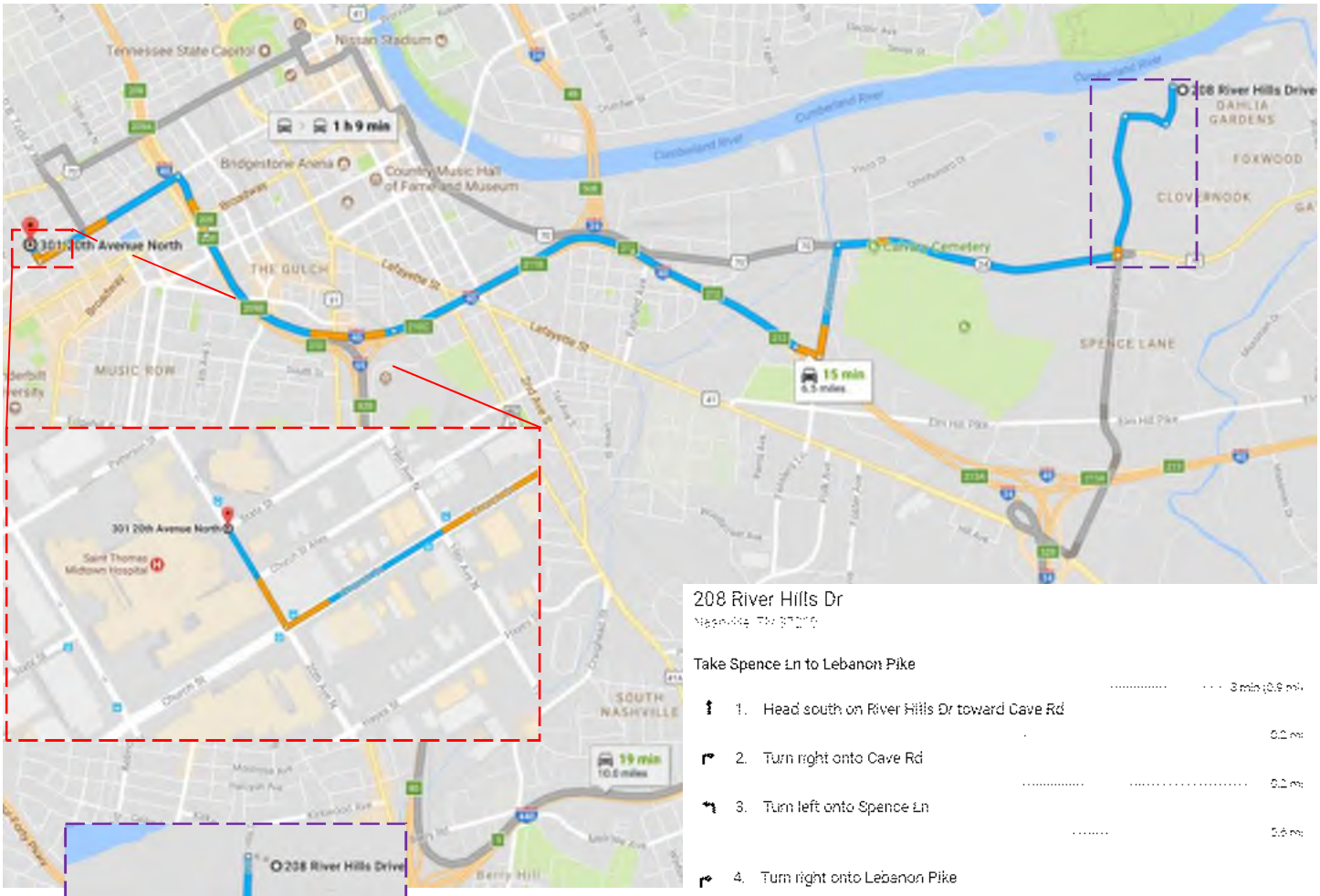
Take Church St to 20th Ave N

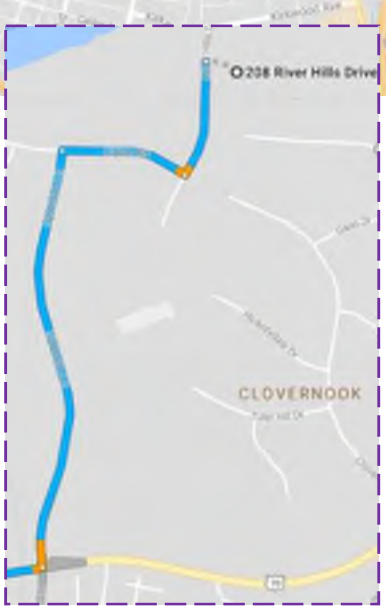
12. Use the left lane to merge onto George L Davis Blvd
13. Turn left onto Church St
14. Turn right onto 20th Ave N

301 20th Ave N

Antioch TS

River Hills Recycle





208 River Hills Dr

Take Spence Ln to Lebanon Pike

1. Head south on River Hills Dr toward Cave Rd
2. Turn right onto Cave Rd
3. Turn left onto Spence Ln
4. Turn right onto Lebanon Pike

Get on I-24 W/I-40 W

5. Turn left onto Fesslers Ln
6. Turn right to merge onto I-24 W/I-40 W

Follow I-40 W to Church St

7. Merge onto I-24 W/I-40 W
8. Keep left at the fork to continue on I-40 W, follow signs for Huntsville/Memphis/Interstate 65 S
9. Keep right to stay on I-40 W
10. Take exit 209 to merge onto George L Davis Blvd

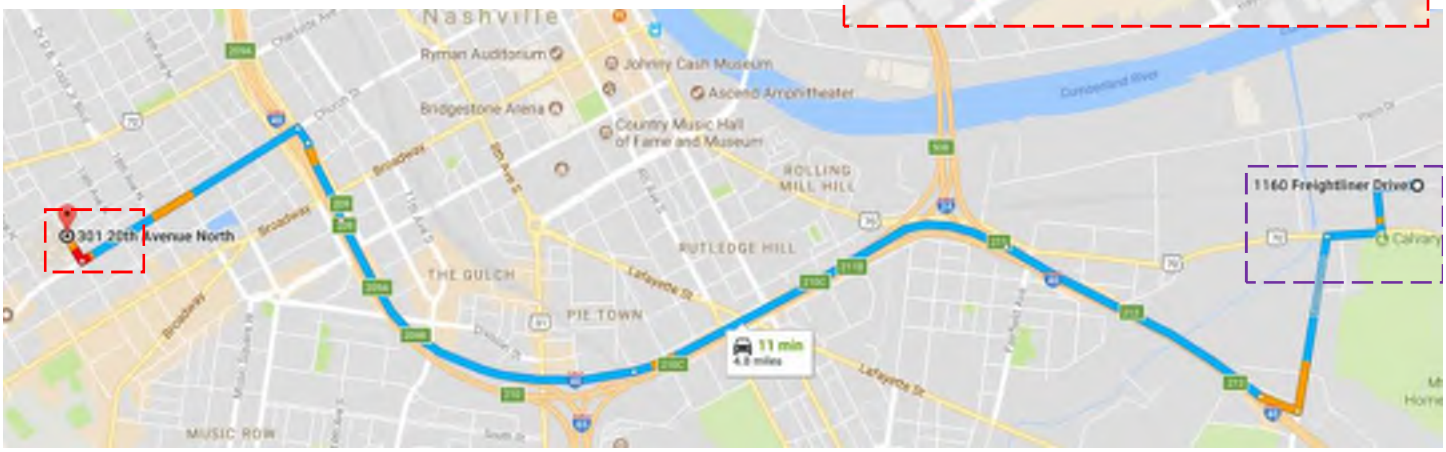
Continue on Church St. Drive to 20th Ave N

11. Turn left onto Church St
12. Turn right onto 20th Ave N

301 20th Ave N

River Hills Recycle

Republic TS



1160 Freightliner Dr

Get on I-24 W/I-40 W from Fesslers Ln

1. Head west on Freightliner Dr toward Omohundro Pl
2. Turn left onto Omohundro Pl
3. Turn right onto Lebanon Pike
4. Turn left onto Fesslers Ln
5. Turn right to merge onto I-24 W/I-40 W

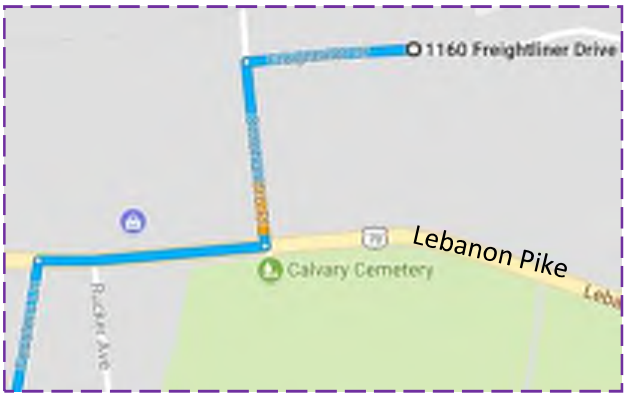
Follow I-40 W to George L Davis Blvd. Take exit 209 from I-40 W

6. Merge onto I-24 W/I-40 W
7. Keep left at the fork to continue on I-40 W, follow signs for Huntsville/Memphis/Interstate 65 S
8. Keep right to stay on I-40 W
9. Take exit 209 to merge onto George L Davis Blvd

Take Church St to 20th Ave N

10. Use the left lane to merge onto George L Davis Blvd
11. Turn left onto Church St
12. Turn right onto 20th Ave N

301 20th Ave N



Republic TS

APPENDIX C

Emergency Contact Form

NOTE: Two copies of this form are to be completed by every field worker. One copy is to be kept at the site during the sampling and sorting event. One copy is to be left with the CDM Smith emergency contact person at the local CDM Smith office.

Name: _____

Home Phone: _____

Blood Type: _____

Date of Last Tetanus Shot: _____

Date of hepatitis vaccination, if any: _____

Medications Currently Taking: _____

_____

Allergies to Medication: _____

_____

If an emergency occurs during sampling or sorting, please contact

Name: _____

Phone: _____

Date Completed: _____

Signature: _____

APPENDIX D
Emergency Telephone Numbers

Emergency Service	Provider	Telephone Number
24-hour non-emergency	AllOne Health	800-350-4511
Health and Safety Manager	Paul Opem	303-383-2483
Project Manager	Chris Gabel	703-691-6430
Project Safety Coordinator	Catherine Cox	312-523-9258
Client Contact	Sharon Smith	615-862-8715
State Environmental Agency	TDEC	888-891-8332
Fire Department	Nashville	911
Police Department	Nashville	911
24-hour ambulance	Nashville	911
Health Department	Nashville	212-788-5261
Poison Control Center	Nationwide	1-800-222-1222
Tennessee Poison Center	1-800-222-1222	

H&S Plan APPROVED: _____ 7/10/2017

Health and Safety Manager Date

HEALTH AND SAFETY PLAN SIGNATURE FORM

CDM Smith Health and Safety Plan

All site personnel must sign this form indicating receipt of the H&SP. Keep this original on site. It becomes part of the permanent project files. Send a copy to the Health and Safety Manager (HSM).

SITE NAME/NUMBER: Metro Nashville Solid Waste Management Plan

DIVISION/LOCATION: TSU – North Central Group

CERTIFICATION:

I understand, and agree to comply with, the provisions of the above referenced H&SP for work activities on this project. I agree to report any injuries, illnesses or exposure incidents to the site Health and Safety Coordinator (SHSC). I agree to inform the SHSC about any drugs (legal and illegal) that I take within three days of site work.

PRINTED NAME	SIGNATURE	DATE

Appendix B
Tabulated Sample Data - Summer 2017 Event

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	WM MRF					
		Date:	7/17/17					
	Material Group	Sample ID:	ARES1	ARES2	ARES3	ARES4	AICI1	AICI2
PAPER	**1**	Newsprint	0.6	8.9	55.9	32.2		3.2
	2	High Grade Office Paper	10.9	1.1	10.8	13.1	15.8	0.1
	3	Magazines/Catalogs	9.4	1.4	11.9	39.7		2.4
	4	Uncoated OCC	59.5	90.9	24.2	34.6	303.3	79.7
	5	Kraft	4.8	3.6	1.9	9.8	0.1	0.2
	6	Boxboard	6.8	12.7	17.8	16.9	1	10.6
	7	Mixed Paper - Recyclable	9.4	7.9	10.3	23.3	1.2	3.8
	8	Compostable Paper and 'other' paper	2.9	7	13.3	3.3	3.2	0.6
	9	Milk and Juice cartons/boxes, coated		0.5	0.9	1.6		
PLASTICS	**10**	#1 PET Bottles/Jars	1	15.8	10.9	13.7	1	3.1
	11	#1 Other PET Containers & Packaging	0.1	1.2	1.6	4.3		
	12	#2 HDPE Bottles/Jars - Clear	0.1	4.4	3.4	1.4	0.8	0.1
	13	#2 HDPE Bottles/ Jars - Color		2.1	1.6	5.2	1	1.2
	14	#2 Other HDPE Containers & Packaging						
	15	#6 Expanded Polystyrene Packaging (EPS)	0.1	0.5	0.4	0.9		0.6
	16	#3-#7 Other - All	0.1	6.8	5.4	4.6	0.6	0.6
	17	Other Rigid Plastic Products	0.1	2.2	7.3	2	5.4	0.2
	18	Grocery & Merchandise Bags	0.1	1.2	1.6	1	0.8	0.1
	19	Trash Bags	0.7	0.5	0.2	0.4	0.5	0.4
	20	Commercial & Industrial Film						0.3
	21	Other Film	15	3.9	4.6	1.9	7.6	1.2
	22	Remainder/ Composite Plastic		0.3	13.6	0.7	0.3	0.5
GLASS	**23**	Glass Bottles and Jars - **clear**		0.9	0.3	3.3		3.7
	24	Glass Bottles and Jars - **brown**	1.5	0.1	2.3	5.8		0.5
	25	Glass Bottles and Jars - **green**						
	26	Glass Bottles and Jars - **blue**						
	27	Flat Glass						
	28	Other Glass			0.1			
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"				0.3		0.1
	30	Yard Waste - Woody; branch >0.5"						
	31	Food Scraps		0.7	0.9	0.1	1.8	1
	32	Bottom Fines and Dirt	1.3	0.5	1.2	0.4	0.4	0.9
	33	Diapers						
	34	Other Organic	0.1				0.1	
METALS	**35**	Aluminum Beverage Containers	0.2	5.8	5.2	5.1	0.3	0.5
	36	Other Aluminum		0.3	0.2	0.3		0.4
	37	Ferrous containers (bi-metal cans)	0.7	2.8	2.5	4.9	1.1	1.3
	38	Aerosol cans		0.1	0.1	0.1	0.3	
	39	Other Ferrous	0.1		4.8	0.1		0.1
	40	Other Non-Ferrous			0.2			
	41	Other Metal		0.9	0.9		0.6	
TEXTILES	**42**	Carpet and carpet padding						
	43	Clothing and other textiles			0.2	0.1		
C&D	**44**	Construction and Demolition materials			5.9	0.4		
MISC INORG.	**45**	Televisions						
	46	Computer Monitors						
	47	Computer Equipment/ Peripherals						1.2
	48	Electronic Equipment						9.1
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics			4.1			
HHW	**50**	Household Hazardous Waste materials	0.1		0.1		1.1	
		Sample Name	ARES1	ARES2	ARES3	ARES4	AICI1	AICI2
SAMPLE DETAILS		Sample Size (pounds)	125.6	185	226.6	231.5	348.3	127.7
		Truck Number	M2	15	401	504	211476	211686
		Time	10:41	12:50	11:59	12:42	12:24	16:20
		Davidson County Subarea	Williamso	14	14	6	14	Wilson
		USD/GSD/SAT	SAT	GSD	GSD	GSD	USD	SAT
		Davidson County Grid	-	075, 076	86	141, 142	-	-
		Private/Metro Hauler	Private	Private	Private	Private	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	WM MRF								
		Date:	7/18/17								
	Material Group	Sample ID:	BRES1	BRES2	BRES3	BRES5	BICI1	BICI2	BICI3	BICI4	BICI5
PAPER	**1**	Newsprint	2.3	19.2	13.3	97.1	5.9	0.8	0.1	0.1	
	2	High Grade Office Paper	7.8	3	10.1	11.3	18.1	30.4		1.2	
	3	Magazines/Catalogs	27.9	16.2	19.8	28.8	2.9		278.7	4	
	4	Uncoated OCC	174.6	75.7	31.4	30.2	57.9	45.2		190.3	138.5
	5	Kraft	5.9	4.1	2.6	1.9	4.5	0.4	0.3	18.9	
	6	Boxboard	12.4	31.5	6.7	7	13.1	7.7	2.8	1.6	45
	7	Mixed Paper - Recyclable	15.5	24.3	11.9	26	19.4	3.2	1.1	0.3	
	8	Compostable Paper and 'other' paper	4.4	10.6	4.3	4.7	8	5.3	1.2		2.4
	9	Milk and Juice cartons/boxes, coated	0.8	1.9	0.4	0.4	1	0.1	0.1	0.3	0.1
PLASTICS	**10**	#1 PET Bottles/Jars	5.1	17.6	5.5	6.2	3.3	1.2	0.2	0.6	0.7
	11	#1 Other PET Containers & Packaging	2	6.5	0.4	0.1	1.5	0.1	0.1	0.4	
	12	#2 HDPE Bottles/Jars - Clear	0.3	7.9	0.6	0.6	0.4	2		0.1	0.1
	13	#2 HDPE Bottles/ Jars - Color	4.4	2.8	1.6	0.8	1.3	0.4	0.1	3.7	0.4
	14	#2 Other HDPE Containers & Packaging	0.1	0.1		0.7	0.1				
	15	#6 Expanded Polystyrene Packaging (EPS)	3.5	1.7	0.1	1.2	0.3	0.6	1	0.4	0.1
	16	#3-#7 Other - All	1.9		2.4	1.9	1.3	0.8	0.1	0.1	0.1
	17	Other Rigid Plastic Products	0.2	3	1.8	0.4	0.8	2.3		2.8	0.1
	18	Grocery & Merchandise Bags	1.4	2.1	1.9	0.8	2.1	0.1		0.1	
	19	Trash Bags	1.4	0.7		0.6	0.7	2.1	0.1		1.2
	20	Commercial & Industrial Film		0.1			0.1	0.1	0.1	12.7	14
	21	Other Film	1.7	4.7	7.2	1	3.6	1.4	0.1	4.6	1.8
	22	Remainder/ Composite Plastic	2.4	0.1	6.2	0.1	1	0.3		9.5	
GLASS	**23**	Glass Bottles and Jars - **clear**	3.6	1.9	1.9	2.4		2.3	3.3	56.2	1.4
	24	Glass Bottles and Jars - **brown**	2.3	0.9	0.4	2.4	0.1	0.5	0.6		
	25	Glass Bottles and Jars - **green**	5.6	3.6			1.6				
	26	Glass Bottles and Jars - **blue**									
	27	Flat Glass									
	28	Other Glass									
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"								0.1	
	30	Yard Waste - Woody; branch >0.5"									
	31	Food Scraps	7.2	1.9	3.2	6	0.9	9.3			47.1
	32	Bottom Fines and Dirt	1.2	0.9	0.7	1.2	0.5	0.3			
	33	Diapers		0.1		6.2	0.1				
	34	Other Organic	0.2	0.2	4.6		0.1	0.5			
METALS	**35**	Aluminum Beverage Containers	4.4	4.6	2.4	0.6	3	0.4	0.6	0.1	19.3
	36	Other Aluminum	0.1	0.6	0.8	0.1	0.1	0.1			
	37	Ferrous containers (bi-metal cans)	1.4	4.7	5.1	4.1	1.3	1.3	0.1	0.1	
	38	Aerosol cans	0.3	0.4	0.4		0.1				
	39	Other Ferrous	0.2	2.9	10.7	0.1	0.1	0.1	4.3		
	40	Other Non-Ferrous			0.1	0.6		4.5			
	41	Other Metal	0.3	0.5	0.6						
TEXTILES	**42**	Carpet and carpet padding									
	43	Clothing and other textiles	0.9		47.6	5.5		0.9	5.8		0.6
C&D	**44**	Construction and Demolition materials		8.6	17.1	2	16.1		0.1		
MISC INORG.	**45**	Televisions									
	46	Computer Monitors									
	47	Computer Equipment/ Peripherals									
	48	Electronic Equipment									0.4
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics								1	
HHW	**50**	Household Hazardous Waste materials	0.1			1.3					
SAMPLE DETAILS		Sample Name	BRES1	BRES2	BRES3	BRES5	BICI1	BICI2	BICI3	BICI4	BICI5
		Sample Size (pounds)	303.8	265.6	223.8	254.3	171.3	124.7	300.9	309.2	273.3
		Truck Number	C8C237	4759AG	4584AF	08C2498	211520	211432	209930	209930	211520
		Time	8:33	10:58	11:12	11:51	7:41	8:22	9:34	12:35	13:14
		Davidson County Subarea	9	3	3	3	10	13	9	12	7
		USD/GSD/SAT	USD	GSD	USD	GSD	USD	USD	USD	USD	USD
		Davidson County Grid	-	40	70	81	-	-	93	-	-
		Private/Metro Hauler	Metro	Metro	Metro	Metro	Private	Private	Private	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	WM MRF								
		Date:	7/19/17								
	Material Group	Sample ID:	CRES1	CRES2	CRES3	CRES4	CRES5	CRES6	CICI1	CICI2	CICI3
PAPER	**1**	Newsprint	16.1	28.2	21.8	60.2	16.6	15.7			
	2	High Grade Office Paper	3.3	7.8	6.2	7.1	20.5	21.5	0.3		0.4
	3	Magazines/Catalogs	28.2	37.9	15.1	35.7	47.6	22.2			
	4	Uncoated OCC	108.6	50.6	53.7	64.2	29.9	54.7	215.4	227.4	167
	5	Kraft	8.9	3.8	9.4	13.9	2.4	6.9	0.9	0.1	16.4
	6	Boxboard	39.3	18.3	17.5	35.1	14.3	6.7	0.6	0.5	3.8
	7	Mixed Paper - Recyclable	18.7	27.4	8.3	20.6	24.5	10.6	0.5	0.3	
	8	Compostable Paper and 'other' paper	10.4	7.9	5.4	10.3	18.3	7.3	10.6	0.3	1.6
	9	Milk and Juice cartons/boxes, coated	1.2	0.3	2.5	1.2	2.2	0.8			
PLASTICS	**10**	#1 PET Bottles/Jars	22.8	6.4	8	11	9	7.9	0.3	0.2	0.7
	11	#1 Other PET Containers & Packaging	3.2	1	1	2.2	1.6	3	0.2		0.5
	12	#2 HDPE Bottles/Jars - Clear	4	2.5	2.2	1.6	2.1	0.1	0.2		
	13	#2 HDPE Bottles/ Jars - Color	8.9	1.4	2.6	3.2	2.6	1.2	0.1		0.3
	14	#2 Other HDPE Containers & Packaging	0.7		0.1	0.1	0.1	0.1			
	15	#6 Expanded Polystyrene Packaging (EPS)	0.2	0.5	0.8	0.4	0.5		0.3	0.2	0.8
	16	#3-#7 Other - All	6.1	3.2	3.8	5.3	3.6	4.6	0.3	0.1	3.7
	17	Other Rigid Plastic Products	2.3	0.1	0.5	0.4	1	0.2	0.6		0.1
	18	Grocery & Merchandise Bags	2	0.1	0.9	0.1	0.6	0.5	0.2	0.1	1
	19	Trash Bags	1.8	0.9	0.4	0.4	0.9	1.2	1.8		0.7
	20	Commercial & Industrial Film	0.1							7.2	
	21	Other Film	4.2	1.2	3.9	3.4	1.7	3.7	1.9	0.1	1.7
	22	Remainder/ Composite Plastic	1.9		1.9	0.9	1.4		0.8	0.8	0.1
GLASS	**23**	Glass Bottles and Jars - **clear**	7.5	2.6	5.1	1.7	1.7	2.1			2.7
	24	Glass Bottles and Jars - **brown**	7.7	2.6	11.3	2.5	0.6		1.2	0.1	
	25	Glass Bottles and Jars - **green**	2.9			1.7	1				
	26	Glass Bottles and Jars - **blue**									
	27	Flat Glass									
	28	Other Glass	1			0.2					
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"		0.1							
	30	Yard Waste - Woody; branch >0.5"			0.1						
	31	Food Scraps	1.2	2.7	0.9				5.3	0.5	7.1
	32	Bottom Fines and Dirt	0.6	0.9	0.6	1.4	0.4	1.4	0.1	0.1	1
	33	Diapers		0.1							
	34	Other Organic		0.1	0.5	0.1	0.4	0.1			
METALS	**35**	Aluminum Beverage Containers	8.6	2.4	6.2	4.9	5.9	0.9	0.1		0.3
	36	Other Aluminum	5.2	0.1	0.3		0.3	0.1	0.1	0.1	
	37	Ferrous containers (bi-metal cans)		3.3	3.9	3.7	3.8	7.3			0.9
	38	Aerosol cans	0.5	0.3	0.2		0.5				
	39	Other Ferrous	0.3		0.3		2.8				2.2
	40	Other Non-Ferrous	0.3								
	41	Other Metal	0.9	0.1		0.3		0.1	0.3		
TEXTILES	**42**	Carpet and carpet padding									
	43	Clothing and other textiles	1.6		0.1	0.1	0.2	0.6	0.1	0.1	
C&D	**44**	Construction and Demolition materials		0.3	7.1		11				0.1
MISC INORG.	**45**	Televisions									0.8
	46	Computer Monitors									
	47	Computer Equipment/ Peripherals									
	48	Electronic Equipment						1.8			
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.1	0.1		1	3.4	0.1	2.7	0.1	1.2
HHW	**50**	Household Hazardous Waste materials			2.3		1		0.4		0.1
SAMPLE DETAILS		Sample Name	CRES1	CRES2	CRES3	CRES4	CRES5	CRES6	CICI1	CICI2	CICI3
		Sample Size (pounds)	331.3	215.2	204.9	294.9	234.4	183.4	245.3	238.3	215.2
		Truck Number	10322	08C2419	08C2381	4759AG	2421AJ	M2	211476	211432	211520
		Time	9:45	10:04	10:50	11:43	11:49	14:08	7:15	7:17	10:36
		Davidson County Subarea	14	10	10	10	7	10	4	14	7
		USD/GSD/SAT	GSD	USD	USD	USD	USD	USD	USD	USD	USD
		Davidson County Grid	076, 087	-	-	-	-	-	-	-	-
		Private/Metro Hauler	Private	Metro	Metro	Metro	Metro	Private	Private	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	WM MRF									
		Date:	7/20/17									
	Material Group	Sample ID:	IRES1	IRES2	IRES3	IRES4	IRES5	IRES6	IICI1	IICI2	IICI3	IICI4
PAPER	**1**	Newsprint	28.1	18.2	61.8	43.7	11.2	18.2	3.1	1		
	2	High Grade Office Paper	9.7	4.3	22	17.3	3.4	6.5	2.1	3.2	13.3	
	3	Magazines/Catalogs	8.7	11.8	86.8	26.6	4	12.1	12.7	5.4		
	4	Uncoated OCC	61.8	41.5	19.2	111.1	86.8	68.9	105.2	147.8	175	174.5
	5	Kraft	2.3	4.9	4.2	0.5	1.9	1.3	3.2	1.6	1.1	0.9
	6	Boxboard	17.6	24.2	17.3	23.4	33.1	20.5	10.2	22.3	4.8	32.9
	7	Mixed Paper - Recyclable	19.4	7.8	23.5	12	7.5	8.7	9.8		27	
	8	Compostable Paper and 'other' paper	3.8	3.3	6.4	6.2	4.6	4.1	12.5	7.6	3	
	9	Milk and Juice cartons/boxes, coated	0.6	1.7	0.7	0.5	0.7	1.2	0.6	0.1		
PLASTICS	**10**	#1 PET Bottles/Jars	9.6	12.7	13.2	6.7	15.4	9.2	2.7	0.8	0.6	0.2
	11	#1 Other PET Containers & Packaging	3.7	2	4.7	0.4	2.3	5.6	1			
	12	#2 HDPE Bottles/Jars - Clear	2.3	3.1	3.2	2.8	5.8	1.2	0.4	0.7	0.5	
	13	#2 HDPE Bottles/ Jars - Color	4.3	4.3	2.4	3.6	5.1	5.3	1.1	0.2		
	14	#2 Other HDPE Containers & Packaging	0.6	2	1.8	0.1			0.2	0.4		
	15	#6 Expanded Polystyrene Packaging (EPS)	0.3	0.6	0.3	1.4	1.1	0.6	1.8	0.2	0.3	
	16	#3-#7 Other - All	4.5	4.7	3.3	1.7	4.2		5.6	0.9	0.3	
	17	Other Rigid Plastic Products	1.6	3.1	1.1	0.1	6	0.2	0.6	11.5	1	
	18	Grocery & Merchandise Bags	0.8	0.8	0.2	0.2	0.8	0.5	1	0.1	0.1	
	19	Trash Bags	0.5	0.4	0.4	0.1	0.1	0.5	5	0.1	0.1	
	20	Commercial & Industrial Film			0.1	0.4		1.5			5.6	1.5
	21	Other Film	1.8	4	2.5	1.4	3.1	2.2	8.8	0.7	0.9	0.1
	22	Remainder/ Composite Plastic	0.8	0.4	0.2	10.5	0.1	0.3	5.2		7	0.1
GLASS	**23**	Glass Bottles and Jars - **clear**	4.5	2	8.3	0.3	1.5	3.5	8.4	1	0.5	
	24	Glass Bottles and Jars - **brown**	1	0.2	0.7	1	0.1	3.9	0.6		0.1	
	25	Glass Bottles and Jars - **green**		2.8	1.3			1.6	6.2			
	26	Glass Bottles and Jars - **blue**						1				
	27	Flat Glass	4.9									
	28	Other Glass										
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"			0.1	0.2			4.6			
	30	Yard Waste - Woody; branch >0.5"			0.8							
	31	Food Scraps	0.2	1.7	8.5	0.3	1.8	0.8	28.8		1.3	
	32	Bottom Fines and Dirt	0.2	0.1	0.4	0.8	0.3	0.3	2.2	0.1	0.1	
	33	Diapers			0.3			0.3	9.2			
	34	Other Organic	0.4	0.4				0.2				
METALS	**35**	Aluminum Beverage Containers	0.3	4.7	2.9	2.4	3.4	3.2	1.8	1.4	0.3	
	36	Other Aluminum	0.8	0.2	0.3	0.2	0.6	0.1	1			
	37	Ferrous containers (bi-metal cans)	6	2.7	4.8	3	3.6	1.5	2.2		0.1	
	38	Aerosol cans	0.4	0.3	0.8		0.2		0.1			
	39	Other Ferrous	0.8	0.7	0.1	3.1	0.1	0.8	5.8			0.1
	40	Other Non-Ferrous							0.3			0.3
	41	Other Metal					0.1	0.1				
TEXTILES	**42**	Carpet and carpet padding										
	43	Clothing and other textiles	2.1	0.1	1.9		0.1		2.6	0.3		
C&D	**44**	Construction and Demolition materials			4.3	0.7	0.2				7.4	
MISC INORG.	**45**	Televisions										
	46	Computer Monitors										
	47	Computer Equipment/ Peripherals							0.1			
	48	Electronic Equipment	0.1	0.2		7.3			0.6		0.1	
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.1			17	0.1					
HHW	**50**	Household Hazardous Waste materials		0.1	1.2				0.6			
SAMPLE DETAILS		Sample Name	IRES1	IRES2	IRES3	IRES4	IRES5	IRES6	IICI1	IICI2	IICI3	IICI4
		Sample Size (pounds)	204.6	172	312	307	209.3	185.9	267.9	207.4	250.5	210.6
		Truck Number	H93	4759AG	4907	08C249	8C2380	8C2497	209930	211520	211432	209930
		Time	7:06	10:07	10:45	11:00	11:13	13:28	7:15	7:30	9:32	9:49
		Davidson County Subarea	6	11	10	13	13	13	9	10	14	11
		USD/GSD/SAT	GSD	USD	USD	USD	USD	USD	USD	USD	GSD	USD
		Davidson County Grid	-	-	131	-	-	-	93	092, 104	-	105
		Private/Metro Hauler	Private	Metro	Metro	Metro	Metro	Metro	Private	Private	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	WM MRF								
		Date:	7/21/17								
	Material Group	Sample ID:	JRES1	JRES2	JRES3	JRES4	JRES5	JRES7	JICI1	JICI2	JICI3
PAPER	**1**	Newsprint	102.7	27.3	10.5	19	13.8	14.3		3.5	
	2	High Grade Office Paper	5.9	15.6	9.1	19	7.8	8.1	0.1	159.6	0.1
	3	Magazines/Catalogs	26.7	21.4	12.9	28.4	20.7	15.4		2.9	
	4	Uncoated OCC	39.5	51	43.8	75.2	59	63.7	159.5	56.3	212.8
	5	Kraft	12.1	5	5.5	2.9	2.5	1.3	0.1	1.8	
	6	Boxboard	16.3	22.5	22.1	13.6	14.7	25.5	39.7	1.5	6.8
	7	Mixed Paper - Recyclable	12.5	33	37.5	26	7.8	11.1		13.8	0.2
	8	Compostable Paper and 'other' paper	4.4	15.2	3.3	8.8	3.3	6.2	2.1	1.8	0.2
	9	Milk and Juice cartons/boxes, coated	0.6		1.7	0.4	0.6	1.7		0.1	
PLASTICS	**10**	#1 PET Bottles/Jars	7.6	12.2	22.3	8.9	7.7	13.3	0.1	0.5	
	11	#1 Other PET Containers & Packaging	1.2	0.5	1.5	2.1	0.3	1.7		0.1	
	12	#2 HDPE Bottles/Jars - Clear	2.2	2.4	3.1	1.5	4.1	5.3		0.2	
	13	#2 HDPE Bottles/ Jars - Color	2.1	4.2	3.9	3.3	6.3	5.1			
	14	#2 Other HDPE Containers & Packaging			0.5	0.2	0.1	1.3		0.5	
	15	#6 Expanded Polystyrene Packaging (EPS)	0.4	0.4	0.7	1.6	0.8	1.2	0.1	0.1	0.1
	16	#3-#7 Other - All	2	2.2	5.4	4.4	2.5	3.7	0.1	0.1	0.3
	17	Other Rigid Plastic Products	0.5	5.3	2.4	4.3	5.7	3.7	0.1	1.8	3.3
	18	Grocery & Merchandise Bags	0.2	1.9	1.5	2.4	0.5	1.6	0.1	0.1	
	19	Trash Bags	0.2	1.3	0.4	1.6	0.5	0.8	1.1	0.2	0.3
	20	Commercial & Industrial Film						0.1		2	0.3
	21	Other Film	2.2	3.9	3.4	5.7	1.6	5.6		0.1	
	22	Remainder/ Composite Plastic	0.1	2.2	1	3.3	8.6	0.7	0.1		
GLASS	**23**	Glass Bottles and Jars - **clear**	0.3	4.1	5.5	1.7	2.2	3			
	24	Glass Bottles and Jars - **brown**	0.2	1.7	2.3	0.3	0.4	0.9			0.3
	25	Glass Bottles and Jars - **green**	1.2	1.1		2.8				1	
	26	Glass Bottles and Jars - **blue**									
	27	Flat Glass									
	28	Other Glass									
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"		14.6				0.2			
	30	Yard Waste - Woody; branch >0.5"									
	31	Food Scraps	3		3.4	0.9	0.1	8.2	1.2	0.2	
	32	Bottom Fines and Dirt	0.4	0.3	0.6	1.8	0.9	0.6			
	33	Diapers	0.2			1		0.5			
	34	Other Organic		0.1		0.1					
METALS	**35**	Aluminum Beverage Containers	3.7	0.8	6.1	6.2	3.7	3.9	0.1	0.1	
	36	Other Aluminum	0.1	0.1	0.1	0.3	0.1	0.1			
	37	Ferrous containers (bi-metal cans)	1.4	3.9	6.1	2.4	3.7	5.4		0.2	
	38	Aerosol cans	0.1		0.3		0.1	1			
	39	Other Ferrous		0.1	2.8	0.7	1.6				
	40	Other Non-Ferrous		0.2				0.6			
	41	Other Metal	0.1	0.4							
TEXTILES	**42**	Carpet and carpet padding									
	43	Clothing and other textiles	1.6	1.6	0.4	2.7		3.2			0.8
C&D	**44**	Construction and Demolition materials		2.7	3.4	0.6					
MISC INORG.	**45**	Televisions									
	46	Computer Monitors									
	47	Computer Equipment/ Peripherals									
	48	Electronic Equipment				1.8	0.3				
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics				1.2					
HHW	**50**	Household Hazardous Waste materials	0.2	0.1		0.4		2.9			
SAMPLE DETAILS		Sample Name	JRES1	JRES2	JRES3	JRES4	JRES5	JRES2	JICI1	JICI2	JICI3
		Sample Size (pounds)	251.9	259.3	223.5	257.5	182	221.9	204.5	248.5	225.5
		Truck Number	2421AJ	4759AG	8C2419	4671AF	4749AG	10611	8C5619	211520	8C5619
		Time	7:41	9:42	10:03	10:04	10:37	10:51	11:58	12:15	14:26
		Davidson County Subarea	13	13	5	5	5	2	9	7	9
		USD/GSD/SAT	USD	GSD	USD	USD	USD	GSD	USD	USD	USD
		Davidson County Grid	-	-	-	71, 72	-	-	93	116	93
		Private/Metro Hauler	Metro	Metro	Metro	Metro	Metro	Private	Metro	Private	Metro

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	Republic TS					
		Date:	7/17/17					
	Material Group	Sample ID:	ERES1	EICI1	EICI2	EICI3	EICI4	EICI5
PAPER	**1**	Newsprint	27.3		0.5	2.3	5.3	
	2	High Grade Office Paper		0.3	5.9			
	3	Magazines/Catalogs			0.9	6		
	4	Uncoated OCC	5.6	40.4	10.5	9.3	52.5	18.2
	5	Kraft	0.6		1.4			
	6	Boxboard	3.8	4.8	0.2	4.9	2	
	7	Mixed Paper - Recyclable	2.5	1	1.2	20.6		
	8	Compostable Paper and 'other' paper	3.2	4	8.9	13.1		
	9	Milk and Juice cartons/boxes, coated						
PLASTICS	**10**	#1 PET Bottles/Jars	3.2	1	5	6.4	0.1	0.5
	11	#1 Other PET Containers & Packaging	3.1					
	12	#2 HDPE Bottles/Jars - Clear			0.1	1.2		
	13	#2 HDPE Bottles/ Jars - Color	1.8					46.4
	14	#2 Other HDPE Containers & Packaging				1.7		
	15	#6 Expanded Polystyrene Packaging (EPS)	4	14	0.2	2.5	4.4	3.3
	16	#3-#7 Other - All	7.1		0.6	6.3	1.3	0.1
	17	Other Rigid Plastic Products	3.2	15.4				
	18	Grocery & Merchandise Bags	2.5		3.9	6		
	19	Trash Bags	2.1	5	0.1	4.2		
	20	Commercial & Industrial Film			13.2		0.9	2.1
	21	Other Film	1.2		18.8	3.7	0.1	0.6
	22	Remainder/ Composite Plastic	1.8		0.5	2.4		5.4
GLASS	**23**	Glass Bottles and Jars - **clear**	0.5	3		9		
	24	Glass Bottles and Jars - **brown**	2.1			3.8		
	25	Glass Bottles and Jars - **green**	1.9					
	26	Glass Bottles and Jars - **blue**				7.4		
	27	Flat Glass				0.6		
	28	Other Glass						
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"		12	33.4	43.6		
	30	Yard Waste - Woody; branch >0.5"						
	31	Food Scraps	45.9		10	34.6		
	32	Bottom Fines and Dirt	3.2		0.8	3.5		
	33	Diapers	4.7			3.3		
	34	Other Organic		1		2.5		
METALS	**35**	Aluminum Beverage Containers	1.2	0.1	1	1.1		
	36	Other Aluminum				0.7		
	37	Ferrous containers (bi-metal cans)	3.2			1.1		
	38	Aerosol cans	0.8			1.1	0.3	
	39	Other Ferrous	2.4		11.5		14.3	
	40	Other Non-Ferrous		5		4.8	1.8	
	41	Other Metal						
TEXTILES	**42**	Carpet and carpet padding	6.7					
	43	Clothing and other textiles	28	2	12.3	5.9		
C&D	**44**	Construction and Demolition materials	30.5	83.6	40.4	0.7	82.6	54.8
MISC INORG.	**45**	Televisions						
	46	Computer Monitors						
	47	Computer Equipment/ Peripherals			0.1			
	48	Electronic Equipment	4.7			3.5		
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.2					5
HHW	**50**	Household Hazardous Waste materials	3			7.2		
SAMPLE DETAILS		Sample Name	ERES1	EICI1	EICI2	EICI3	EICI4	EICI5
		Sample Size (pounds)	212	192.6	181.4	225	165.6	136.4
		Truck Number	8C4145	3036	3082	1224	3092	3038
		Time	8:40	9:21	11:45	12:37	13:25	13:50
		Davidson County Subarea	5	11	4	13	11	2
		USD/GSD/SAT	USD	USD	GSD	USD	USD	GSD
		Davidson County Grid	72	119	25	162	118	33
		Private/Metro Hauler	Metro	Private	Private	Private	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	Republic TS									
		Date:	7/18/17									
	Material Group	Sample ID:	FRES1	FRES3	FRES4	FRES5	FRES6	FRES7	FRES8	FICI1	FICI3	FICI4
PAPER	**1**	Newsprint		1.9	0.2	1.6	0.5	9.4	2.9	0.3	0.2	
	2	High Grade Office Paper			1.1	0.1	1.1	17.6	0.3	0.1		
	3	Magazines/Catalogs			1.1	1.5			3.8	1.9		
	4	Uncoated OCC		4.3		3.5	12.1		1.9	30.9	31.9	1
	5	Kraft		0.2	0.2	0.2	0.4			0.1		
	6	Boxboard		0.1	2.5	2.9	0.8		5.3		3.6	
	7	Mixed Paper - Recyclable	6.9	5.7	3.9	8.1	6.1	4.7	8.7	4.1	6.6	
	8	Compostable Paper and 'other' paper		11.3	17.9	18.9	21.1		20.8	13.5	18.3	
	9	Milk and Juice cartons/boxes, coated		0.4			1				0.2	
PLASTICS	**10**	#1 PET Bottles/Jars		5.1	3.6	5.9	12.1	2.9	9	3.3	6.5	
	11	#1 Other PET Containers & Packaging			0.1		0.3					
	12	#2 HDPE Bottles/Jars - Clear		0.8	0.6	0.5	0.2			1	1.2	
	13	#2 HDPE Bottles/ Jars - Color				0.4			4	1.2		
	14	#2 Other HDPE Containers & Packaging		0.3	1.2	4		6		3.4	2.6	
	15	#6 Expanded Polystyrene Packaging (EPS)		4.3	3.8	1.3	2.3	0.1	1.6	0.3	8.2	2.9
	16	#3-#7 Other - All		2.8	4.3	5.5	7.2	0.6	5.8	0.6	8.8	6.3
	17	Other Rigid Plastic Products	26.8	15.4		5.4	15.7	5.2	4	3.1	0.5	
	18	Grocery & Merchandise Bags		1.2	1.9	2.5	1.1		3.2		0.8	
	19	Trash Bags		3	2.3	3.9	6.2	5.1	3.8	4.9	3.2	
	20	Commercial & Industrial Film						0.2			6.2	
	21	Other Film		3.9	4.8	5.7	5.7		6.4	4.2	7.1	
	22	Remainder/ Composite Plastic			5.3			3.8				
GLASS	**23**	Glass Bottles and Jars - **clear**		3.3	3.4	6.3	1.8		3.9	7.1	23.8	
	24	Glass Bottles and Jars - **brown**			0.5	6.5			5.3	1.8	11.1	
	25	Glass Bottles and Jars - **green**			0.2	1.1				0.7	1.3	
	26	Glass Bottles and Jars - **blue**							2.2			
	27	Flat Glass										
	28	Other Glass										
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"			3.5	0.2		5.6	0.1	0.1	0.2	82.1
	30	Yard Waste - Woody; branch >0.5"				3.3		2.1				
	31	Food Scraps		33.6	64.7	40.8	43.6	3.7	23.4	19.6	73.6	
	32	Bottom Fines and Dirt		1.5	3.2	1.2	1.6	1.3	0.6	1.3	1.7	
	33	Diapers		2.6		3			13.3	0.8	1	
	34	Other Organic		0.4	0.6					0.5	0.1	
METALS	**35**	Aluminum Beverage Containers		0.9	0.9	10.7	1.8	0.2	3.5	1.1	4.3	
	36	Other Aluminum			0.5	0.7				0.1	0.1	
	37	Ferrous containers (bi-metal cans)		3.1	2.6	4.5	0.9		5.5	3.4		
	38	Aerosol cans		0.1	0.7	1.5	0.5		0.5	0.4	0.1	
	39	Other Ferrous				1.6	0.3	0.3		0.5		0.2
	40	Other Non-Ferrous		0.4			0.1	2.8			0.1	
	41	Other Metal			4.5							
TEXTILES	**42**	Carpet and carpet padding						1.4				
	43	Clothing and other textiles	16.3	33	14	4.9	7	17.7	2.3	0.6	2.2	
C&D	**44**	Construction and Demolition materials	40.8					31.9		40.2	1.6	80
MISC INORG.	**45**	Televisions										
	46	Computer Monitors										
	47	Computer Equipment/ Peripherals								0.3		
	48	Electronic Equipment	27.2	23.7			2.4		0.6	3.8	6.1	
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	172.3	35.2			20.3	7.9		35.1		32.6
HHW	**50**	Household Hazardous Waste materials		3.6	0.1	5.1	0.6	0.4		0.7		
SAMPLE DETAILS		Sample Name	FRES1	FRES3	FRES4	FRES5	FRES6	FRES7	FRES8	FICI1	FICI3	FICI4
		Sample Size (pounds)	290.3	202.1	154.2	163.3	174.8	130.9	142.7	191	233.2	205.1
		Truck Number	4635AI	8C2176	H62	71	8C2176	AC4143	4749AG	12	1229	8C4202
		Time	9:46	10:40	11:10	12:10	14:00	13:41	14:25	7:02	8:05	9:01
		Davidson County Subarea	5	10	3	7	8	5	5	12	3	7
		USD/GSD/SAT	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
		Davidson County Grid	072, 061	104, 105	058, 059	103	92	72	71	161	58	91
		Private/Metro Hauler	Metro	Metro	Private	Private	Metro	Metro	Metro	Private	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	Republic TS						
		Date:	7/19/17						
	Material Group	Sample ID:	GRES1	GRES2	GRES3	GRES4	GRES5	GRES6	GRES7
PAPER	**1**	Newsprint	1.3	1.1	6.2	1.3			0.1
	2	High Grade Office Paper	7.7	0.1	0.2	3.1		0.1	
	3	Magazines/Catalogs		0.4			0.6		
	4	Uncoated OCC	9	4	1.9	11.5	1.8	0.6	
	5	Kraft	0.1			0.1		0.8	
	6	Boxboard	2	1.9		14.4	0.2	4	0.1
	7	Mixed Paper - Recyclable	13.4		2.4	6.2	3	6.2	
	8	Compostable Paper and 'other' paper	19.8	25.7	17.5	2.8	2.5	19.1	2.6
	9	Milk and Juice cartons/boxes, coated		0.3				0.8	
PLASTICS	**10**	#1 PET Bottles/Jars	4.3	2.2	3.3	12.7	0.3	6.5	
	11	#1 Other PET Containers & Packaging							
	12	#2 HDPE Bottles/Jars - Clear	0.8	0.7	1.2	1.3		1.1	
	13	#2 HDPE Bottles/ Jars - Color	0.2		0.4	0.4			0.8
	14	#2 Other HDPE Containers & Packaging	0.2	0.1	0.5				
	15	#6 Expanded Polystyrene Packaging (EPS)	1	1.4	1.3	1.7	0.4	3.3	
	16	#3-#7 Other - All	4.6	4.4	3.8	3.6	0.9	6	3.6
	17	Other Rigid Plastic Products	2.1	0.4		0.1	17.7		6.5
	18	Grocery & Merchandise Bags	1.4	0.6	1.9	1.4	0.1	2.9	0.1
	19	Trash Bags	3.4	2.1	1.8	4.4	0.5	3	0.6
	20	Commercial & Industrial Film			1.8		10.3		1.6
	21	Other Film	3.7	4.2	4.8	9.2	0.8	4	
	22	Remainder/ Composite Plastic	0.2		5.2	0.4	0.9	3.5	
GLASS	**23**	Glass Bottles and Jars - **clear**	7.6	2.6	3	7.9		3.5	
	24	Glass Bottles and Jars - **brown**	3.5		1			2.9	
	25	Glass Bottles and Jars - **green**	1.3		1.3			0.3	
	26	Glass Bottles and Jars - **blue**							
	27	Flat Glass							
	28	Other Glass							
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"		4.7				14.5	
	30	Yard Waste - Woody; branch >0.5"							
	31	Food Scraps	49	17	51.2	50.8	4.4	86.3	6.2
	32	Bottom Fines and Dirt		1.5					
	33	Diapers	2.7	8.4	7.1	0.8	8.9	5.9	
	34	Other Organic		3.3	0.3			0.2	
METALS	**35**	Aluminum Beverage Containers	3	1.7	1.2	1.4	0.2	4.3	
	36	Other Aluminum	0.1	0.1	0.1	1.5	0.1	0.4	
	37	Ferrous containers (bi-metal cans)	1.3	3.5	2.2	1.1	0.6	0.6	
	38	Aerosol cans	0.3	0.8	0.3				
	39	Other Ferrous	0.7	2.7		0.1	0.1		3.9
	40	Other Non-Ferrous							
	41	Other Metal							
TEXTILES	**42**	Carpet and carpet padding							
	43	Clothing and other textiles	22.4	6.6	4.3	5	41.2	17.5	16.6
C&D	**44**	Construction and Demolition materials			6			11	177
MISC INORG.	**45**	Televisions							
	46	Computer Monitors							
	47	Computer Equipment/ Peripherals							17.8
	48	Electronic Equipment	0.1		3.7				
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	22.2	19.7	28	21.5	37.6	1	8.4
HHW	**50**	Household Hazardous Waste materials	4.3	9.3	3	0.1	0.8	1.4	
SAMPLE DETAILS		Sample Name	GRES1	GRES2	GRES3	GRES4	GRES5	GRES6	GRES7
		Sample Size (pounds)	193.7	131.5	166.9	164.8	133.9	211.7	245.9
		Truck Number	2038	2035	2036	8C1769	M4675AF	E95	H53
		Time	10:00	10:30	12:10	14:05	14:50	15:50	16:10
		Davidson County Subarea	14	6	6	7	4	5	11
		USD/GSD/SAT	GSD	USD	USD	USD	USD	USD	USD
		Davidson County Grid	-	-	-	-	43	-	94
		Private/Metro Hauler	Private	Private	Private	Metro	Metro	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	Republic TS									
		Date:	7/20/17									
		Material Group	Sample ID:	HRES1	HRES2	HRES3	HRES4	HRES5	HRES6	HRES7	HRES8	HICI1	HICI2
PAPER	**1**	Newsprint		0.6	2.7			3.6		0.4	2.5		5.2
	2	High Grade Office Paper					0.1		1.4	0.7	2	45.1	0.4
	3	Magazines/Catalogs				1.8	0.8	7.1		5.3	4.6	7.2	
	4	Uncoated OCC		0.7	28.7	1.7	2.9	3.2	2.1	1.8		0.8	7.8
	5	Kraft		0.3	0.6								0.5
	6	Boxboard		0.6	2.3	1.7	2.6	5.5	2.1	2.1	6.1	0.7	0.8
	7	Mixed Paper - Recyclable		3.8	4.3	5.7	2.1	14.3		5.2	7.2	8.9	0.6
	8	Compostable Paper and 'other' paper		16.4	18	17.9	16.8	12.1	10.4	15.1	18	28.7	6.7
	9	Milk and Juice cartons/boxes, coated		0.3	0.1		0.2	0.3			0.1	0.4	
PLASTICS	**10**	#1 PET Bottles/Jars		5.3	2.6	6.9	6.6	1.2	4	7	3.4	4.5	1.9
	11	#1 Other PET Containers & Packaging						2					
	12	#2 HDPE Bottles/Jars - Clear		0.8	1.2	0.8	1.1		0.2	3.5	0.7	1	0.1
	13	#2 HDPE Bottles/ Jars - Color		1.4		2.6					0.3	0.5	
	14	#2 Other HDPE Containers & Packaging			0.3	1.1		0.4	2				0.2
	15	#6 Expanded Polystyrene Packaging (EPS)		2.4	2.4	1.7	3.7	1.7	1.7	1.7	2.9	1.1	2.4
	16	#3-#7 Other - All		5.7	8.3	4.4	3.2	3.3	1.6	2.7	3.4	7.7	1.9
	17	Other Rigid Plastic Products		4.7	1.6	0.6	0.7	0.3	0.1		3.7	6.9	0.8
	18	Grocery & Merchandise Bags		2.1	1.5	1.7	2.1	1	1.3	3.8	1.4	0.4	0.4
	19	Trash Bags		2.7	2.5	2.2	2.6	1.6	1.4	1.5	2.5	7	1.4
	20	Commercial & Industrial Film				13				0.1			1.6
	21	Other Film		4.6	6.1	4.2	4.1	4.2	3	4.2	6	4.6	1.6
	22	Remainder/ Composite Plastic		2.5	1.2			0.5		8.1	0.3		
GLASS	**23**	Glass Bottles and Jars - **clear**		12.7	5.8	12.1	11.5	12.7	4	4.2	7.7	1.3	2.5
	24	Glass Bottles and Jars - **brown**		0.1	6.7	4.3	11		0.2	4.4	1		2.5
	25	Glass Bottles and Jars - **green**						2.7					0.2
	26	Glass Bottles and Jars - **blue**							1.9				
	27	Flat Glass											
	28	Other Glass											
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"				28.8			69.3	19.3	12	20.5	
	30	Yard Waste - Woody; branch >0.5"											
	31	Food Scraps		53.3	22.5	36.4	58.8	43	45.1	31.6	68.6	40.2	23.4
	32	Bottom Fines and Dirt											
	33	Diapers		3.1	4.5	5.5	4.6	44.3	8.2	4.8	17.1		3
	34	Other Organic		0.1	0.1		0.1		0.1		10.9		0.2
METALS	**35**	Aluminum Beverage Containers		1.6	1.3	2.8	1	1.4	1.7	0.8	2.8	1.6	1.2
	36	Other Aluminum		0.3		0.3	0.1	0.5	0.8	3.1	1.2	0.2	0.1
	37	Ferrous containers (bi-metal cans)		1.2	0.3	0.6	2.4	0.1	1.8	1.8	0.9		1
	38	Aerosol cans		0.4		0.2	0.1		1.8	2	0.8		
	39	Other Ferrous			8.5					1.4			
	40	Other Non-Ferrous											
	41	Other Metal											
TEXTILES	**42**	Carpet and carpet padding											
	43	Clothing and other textiles		42.7		13.6	3.2	1.3	9.1	32	8.1	0.7	
C&D	**44**	Construction and Demolition materials			67.4	8.9	14.2	27.9	18.4			2.2	87.3
MISC INORG.	**45**	Televisions											
	46	Computer Monitors											
	47	Computer Equipment/ Peripherals											
	48	Electronic Equipment		4.5	2.2	2	7.2		0.1			5.5	10
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics		1.5	0.2	33.5	21.1	16.5	9.7	4.3	4.4	2	3.8
HHW	**50**	Household Hazardous Waste materials		7.1		1.4		0.4	2.6			4	
SAMPLE DETAILS		Sample Name		HRES1	HRES2	HRES3	HRES4	HRES5	HRES6	HRES7	HRES8	HICI1	HICI2
		Sample Size (pounds)		183.5	203.9	218.4	184.9	213.1	206.1	172.9	200.6	203.7	169.5
		Truck Number		10343	H20	H74	E64	I08	E91	H64	2002	3060	1214
		Time		6:15	6:45	7:15	9:20	10:35	11:25	12:55	13:30	8:00	8:30
		Davidson County Subarea		7	10	11	10	12	6	13	10	10	11
		USD/GSD/SAT		USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
		Davidson County Grid		-	144	-	131	133	147	134	104	104	119
		Private/Metro Hauler		Private	Private	Private	Private	Private	Private	Private	Private	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	Republic TS								
		Date:	7/21/17								
	Material Group	Sample ID:	DRES1	DRES3	DRES4	DRES5	DRES6	DICI1	DICI2	DICI3	DICI4
PAPER	**1**	Newsprint			2.2			0.2		2.2	
	2	High Grade Office Paper			2.2	14.3				2.9	2.8
	3	Magazines/Catalogs				0.2		0.5	0.1	0.2	3.5
	4	Uncoated OCC	2.4	2.5		0.5	3.1	17.2	44	10.4	0.7
	5	Kraft		0.5							
	6	Boxboard	0.4	7	1.2	0.7	1.3	4.3	3	4.6	2.8
	7	Mixed Paper - Recyclable	2.9	6.5	1.6	2	1.6		5.9	2.7	7.8
	8	Compostable Paper and 'other' paper	22.2	18.6	19.1	17.5	23	28	21.5	23.7	10.6
	9	Milk and Juice cartons/boxes, coated	0.3			0.4		0.2	0.2	0.1	
PLASTICS	**10**	#1 PET Bottles/Jars	3.6	4.4	7	5.6	2.5	5.6	3.9	8.1	2.3
	11	#1 Other PET Containers & Packaging									
	12	#2 HDPE Bottles/Jars - Clear		0.1	0.2	0.5		0.5	0.7	0.9	0.6
	13	#2 HDPE Bottles/ Jars - Color	1.3		0.9	1.9		1.4	0.6	2.6	0.6
	14	#2 Other HDPE Containers & Packaging		1.2			0.7				
	15	#6 Expanded Polystyrene Packaging (EPS)	1.5	2.5	1.7	2.7	0.4	2.6	1.4	4.4	3.3
	16	#3-#7 Other - All	2	3.5	2.3	2.9	3.1	5	2.4	4.5	5.1
	17	Other Rigid Plastic Products	0.7	1.7		1.4	12.7	4.4		0.9	2.9
	18	Grocery & Merchandise Bags	0.8	1.8	1.9	2.1	1.4	1.6	0.2		1.1
	19	Trash Bags	2	2.6	2.1	1.8	2.8	5.9	3.2	5.7	3.4
	20	Commercial & Industrial Film				0.3		0.2		1.3	0.1
	21	Other Film	2.9	4.4	4.8	6.3	3	4	10.7	18	2.4
	22	Remainder/ Composite Plastic		0.5	1.2	0.1	0.4		1.9	0.9	0.4
GLASS	**23**	Glass Bottles and Jars - **clear**	6.2	10.4	3.7	6.6	2.7	1.6	5.2	1.6	2.4
	24	Glass Bottles and Jars - **brown**	1.5	12.2	9.2	0.1		12.4	1.9		
	25	Glass Bottles and Jars - **green**		0.5	0.1	3.4		1.7		1.1	
	26	Glass Bottles and Jars - **blue**									
	27	Flat Glass									
	28	Other Glass									
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	6.7	0.1	28.8	0.1	10	4.3		18	
	30	Yard Waste - Woody; branch >0.5"									
	31	Food Scraps	42.5	17.3	38.1	65.5	23.9		43.6	49.2	44.2
	32	Bottom Fines and Dirt						35.7			
	33	Diapers	0.8	16.8	3.9	12.8	10.9		0.8	6.2	4.6
	34	Other Organic		4.8	1.5	8.9	3.3			2.7	
METALS	**35**	Aluminum Beverage Containers	1.4	3.8	1.8	0.9	6.1	4.4	1.3	3.4	0.4
	36	Other Aluminum	0.3	0.1	0.1	0.7	0.1	0.1	0.6	0.1	0.5
	37	Ferrous containers (bi-metal cans)		1.2	0.4	2.2	1.1	0.3	0.2	1.7	3.3
	38	Aerosol cans	0.1	0.7	0.5	0.1		0.1		0.25	
	39	Other Ferrous	0.1	0.4			14.4	1	9.6		5.2
	40	Other Non-Ferrous									
	41	Other Metal									
TEXTILES	**42**	Carpet and carpet padding					9.1				
	43	Clothing and other textiles	45	10.3	2.4	4.3	23.1	3.1	2.5	3.9	1.7
C&D	**44**	Construction and Demolition materials	30.5	0.9				47.2			0.7
MISC INORG.	**45**	Televisions									
	46	Computer Monitors									
	47	Computer Equipment/ Peripherals									
	48	Electronic Equipment			0.2		6.2	0.2	0.1		7.4
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	4.9	4.3	34.4	2.2	35.8	0.3	57	7.6	33.8
HHW	**50**	Household Hazardous Waste materials	0.3	2.3				4.5			
		Sample Name	DRES1	DRES3	DRES4	DRES5	DRES6	DICI1	DICI2	DICI3	DICI4
SAMPLE DETAILS		Sample Size (pounds)	183.3	143.9	173.5	169	202.7	198.5	222.5	189.85	154.6
		Truck Number	10344	2377	E78	H99	61	1241	1231	1229	8C1769
		Time	6:40	9:22	10:35	11:45	12:15	5:30	6:00	6:30	7:30
		Davidson County Subarea	5	5	14	13	14	11	12	5	12
		USD/GSD/SAT	USD	USD	USD	USD	GSD	USD	USD	USD	USD
		Davidson County Grid	82	71	84	149	-	119	147	61	133, 147
		Private/Metro Hauler	Private	Metro	Private	Private	Private	Private	Private	Private	Metro

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	WM Antioch TS								
		Date:	7/24/17								
	Material Group	Sample ID:	KRES1	KRES2	KICI2	KICI3	KICI4	KICI5	KICI6	KICI7	KICI8
PAPER	**1**	Newsprint	0.7	0.9	4.8	9.6	0.3		0.3	4.3	
	2	High Grade Office Paper	5.5	6	1.2	1	0.7		0.1		
	3	Magazines/Catalogs	2	0.4	1.6	5.5	1.4		0.7		
	4	Uncoated OCC	3.8	9.1	20.6	19.4	12.9	26	32.2	19.1	64.7
	5	Kraft	0.1	8.8	0.2	0.4	0.1	0.1	0.3	0.3	
	6	Boxboard	6.9	5	10	9.7	4.9	0.1	5.7	7	0.9
	7	Mixed Paper - Recyclable	8.7	3.5	2.3	6	4.9		3.3	1.3	3.3
	8	Compostable Paper and 'other' paper	26.5	22.2	21.7	32.2	17.2		25.2	78	32.5
	9	Milk and Juice cartons/boxes, coated	0.4	0.9	0.6	0.5	1.7		0.9	0.9	
PLASTICS	**10**	#1 PET Bottles/Jars	7.6	5.3	5	13.5	5.9	0.4	3.5	7	0.4
	11	#1 Other PET Containers & Packaging	1.3	0.8	0.8		0.2		0.6	2.6	0.2
	12	#2 HDPE Bottles/Jars - Clear	0.1	0.5	1.2	1.4	1.6		0.9	1.4	
	13	#2 HDPE Bottles/ Jars - Color	2.3	1.4	1.7	2.8	0.5		0.9	0.5	0.1
	14	#2 Other HDPE Containers & Packaging		0.1							
	15	#6 Expanded Polystyrene Packaging (EPS)	2.7	2.3	1.6	1.6	3		2.9	0.8	0.3
	16	#3-#7 Other - All	3.6	5.3	3.6	6.1	2.2		4.5	7.5	0.3
	17	Other Rigid Plastic Products	1	0.6	7.9		1.4	2.7	1.7	16.5	0.1
	18	Grocery & Merchandise Bags	2.6	2.9	4.1	4.7	4.7		2.7	1.9	0.2
	19	Trash Bags	3.9	6	2.7	4.7	2.7		3.1	22.9	0.1
	20	Commercial & Industrial Film						4.1	2.2		84.5
	21	Other Film	7.1	7.5	4.6	6.4	3	0.1	6.4	11.3	1.3
	22	Remainder/ Composite Plastic	1.4	13.1	1.4	6.9	3.7		4.3		2.6
GLASS	**23**	Glass Bottles and Jars - **clear**	7.3	13.3	8.2	14.6	4	0.9	10.9	5.1	
	24	Glass Bottles and Jars - **brown**	4.5	5.4	28.2	3.9	4.1		5.3	13.5	
	25	Glass Bottles and Jars - **green**		2.1	0.7				3.4	2.9	
	26	Glass Bottles and Jars - **blue**									
	27	Flat Glass									
	28	Other Glass	0.3								
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"		7.2		0.2	5.8				
	30	Yard Waste - Woody; branch >0.5"		0.6							
	31	Food Scraps	90.5	72.6	40.2	48.6	30.5		43.7	32.4	1.8
	32	Bottom Fines and Dirt	3.7	1.4	1.2	6.9		0.4		1.2	
	33	Diapers	12.8	0.8	3.7	3.6	3.8		4.6	7.5	
	34	Other Organic	22.5	6.7		10.8	18.9		13.5	1	0.2
METALS	**35**	Aluminum Beverage Containers	2.1	1.3	2	4	2.5		0.6	3.1	0.5
	36	Other Aluminum	0.3	1.5	0.8	1.3	0.7		0.3	0.5	
	37	Ferrous containers (bi-metal cans)	4.4	5	2.7	3.4	2.5	0.7	2.9		
	38	Aerosol cans	3.8	1.1	0.9		0.3		0.5	0.3	0.3
	39	Other Ferrous	0.1	0.1				1.3		0.7	1.2
	40	Other Non-Ferrous									
	41	Other Metal			1.7	2.4					8
TEXTILES	**42**	Carpet and carpet padding									
	43	Clothing and other textiles	7.4	3.6	6.1	19.5	2.4		2.6	22.7	
C&D	**44**	Construction and Demolition materials	47.3	5.7	16.3	19	15.2	201.5	9.4	1.5	5.2
MISC INORG.	**45**	Televisions									
	46	Computer Monitors									
	47	Computer Equipment/ Peripherals									
	48	Electronic Equipment	0.4		0.1	0.3	11.3		21	0.8	21.3
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.1			5.3			27		
HHW	**50**	Household Hazardous Waste materials	12.1		1.3		0.6	3.1	0.9	1.8	
		Sample Name	KRES1	KRES2	KICI2	KICI3	KICI4	KICI5	KICI6	KICI7	KICI8
SAMPLE DETAILS		Sample Size (pounds)	307.8	231	211.7	276.2	175.6	241.4	249	278.3	230
		Truck Number	519	519	211198	3497	211516	403	414538	414210	415586
		Time	7:22	11:11	8:00	9:05	9:30	9:38	10:13	12:08	13:20
		Davidson County Subarea	11	14	13	14	14	11	7	12	13
		USD/GSD/SAT	SAT	USD	USD	USD	GSD	USD	USD	USD	USD
		Davidson County Grid	118	-	-	96	-	94	-	160	-
		Private/Metro Hauler	Private	Private	Private	Private	Private	Private	Private	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	WM Antioch TS									
		Date:	7/25/17									
		Material Group Sample ID:	LRES1	LRES2	LRES3	LICI1	LICI2	LICI3	LICI4	LICI5	LICI6	LICI7
PAPER	**1**	Newsprint	1.1	0.2	3.2	0.2	0.1	1.1	2.8	2.2		
	2	High Grade Office Paper	1.2	0.8	4.5		2.7	15.8		10.2	0.1	
	3	Magazines/Catalogs	3.2	1.1	2.9		0.8	3.7	6	1.5		
	4	Uncoated OCC	15.5	30.7	6.5	26.3	18.9	78.3	69.1	18.9	63.1	
	5	Kraft	0.4			0.1	0.2	0.4				
	6	Boxboard	11	1.5	6.4	12	5.5	1.9	0.9	2.9	0.3	
	7	Mixed Paper - Recyclable	13.2	0.4	16.4	2.2	6.8	1.3	3.6	1.3	0.1	
	8	Compostable Paper and 'other' paper	47.9	9.9	30.1	2.5	15.7	33.8	15.2	34.9	6.7	
	9	Milk and Juice cartons/boxes, coated	0.9	0.2	0.5			0.4		0.6		
PLASTICS	**10**	#1 PET Bottles/Jars	5.2	2.6	4.4		6	3.6	0.8	3.3	0.8	
	11	#1 Other PET Containers & Packaging	1.3	0.9	0.4	0.8	0.7	0.6	0.1		0.2	
	12	#2 HDPE Bottles/Jars - Clear	1.5		0.9	1.4	3.1	1	0.3	0.5		
	13	#2 HDPE Bottles/ Jars - Color	0.4	0.4	1.1		1.2	0.3		0.2	0.3	
	14	#2 Other HDPE Containers & Packaging										
	15	#6 Expanded Polystyrene Packaging (EPS)	1.2	2.5	2.2	0.3	4.5	2.7	0.5	1.6	48	
	16	#3-#7 Other - All	7.7		9.4	0.5	4.7	6.6	3.4	6.5		0.2
	17	Other Rigid Plastic Products	0.9	0.7	0.6	1.5	2.9	1	3.3	0.8	0.7	
	18	Grocery & Merchandise Bags	3.2	1.4	7	0.2	4.7	1.2	0.1	2.9		
	19	Trash Bags	4.5	1.6	5.8	0.1	3.5	9.1	2.9	5		
	20	Commercial & Industrial Film		0.6		7.7				0.5	53.3	
	21	Other Film	8.6	2.5	11.9	2.1	11.3	8.6	0.8	7.8	4	
	22	Remainder/ Composite Plastic	3	1.5	5.4		2.2	1.4		2.1	0.2	
GLASS	**23**	Glass Bottles and Jars - **clear**	1.7	5.4	1.4		3.9	2.2	0.6	8.7		
	24	Glass Bottles and Jars - **brown**	3.8	1	2.2		0.3			7.7		
	25	Glass Bottles and Jars - **green**		0.4	2.8				79.3	2.3		
	26	Glass Bottles and Jars - **blue**										
	27	Flat Glass						0.2				
	28	Other Glass										
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.7	0.1	0.6		0.1			0.2	0.1	
	30	Yard Waste - Woody; branch >0.5"										
	31	Food Scraps	33.5	11.5	37.1	15.7		31.4	6.6	27.9		
	32	Bottom Fines and Dirt		0.3	1.9		33.7	0.4				
	33	Diapers	23.7	2.3			17.5					
	34	Other Organic	19.1	0.9	15.7	1.7	11.4		0.4	10.8		
METALS	**35**	Aluminum Beverage Containers	2.8	0.5	1.7	0.1	6	1.2	0.2	1.9		
	36	Other Aluminum	0.7	0.8	0.4	0.1	0.8	0.2		0.2		
	37	Ferrous containers (bi-metal cans)	3.6	1.4	2.8	1.4	3	0.9		1.6		
	38	Aerosol cans	0.2		0.2		0.5					
	39	Other Ferrous			2.1	0.3	0.4	0.1			0.9	
	40	Other Non-Ferrous								1.1		
	41	Other Metal		0.3		23.8		1.5				2.4
TEXTILES	**42**	Carpet and carpet padding										
	43	Clothing and other textiles	30.7	11.9	9.1	0.1	15.1	1	1.3	3.4	0.4	0.3
C&D	**44**	Construction and Demolition materials	3.1	138.5	6.8	105.2	18.5	15.5	0.1	12	64.1	180.3
MISC INORG.	**45**	Televisions										
	46	Computer Monitors										
	47	Computer Equipment/ Peripherals										9.1
	48	Electronic Equipment	0.4	0.1	2.4		0.8	0.2			0.3	
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	9.6				0.1					113.3
HHW	**50**	Household Hazardous Waste materials	0.1	0.4	3.4			0.4		0.6	2.1	
SAMPLE DETAILS		Sample Name	LRES1	LRES2	LRES3	LICI1	LICI2	LICI3	LICI4	LICI5	LICI6	LICI7
		Sample Size (pounds)	265.6	235.3	210.2	206.3	207.6	228	198.3	182.1	245.7	305.6
		Truck Number	10561	414467	435	401	211686	211198	414215	211691	414551	211690
		Time	6:17	8:05	12:27	6:07	6:37	8:32	9:45	10:19	11:35	12:38
		Davidson County Subarea	6	6	12	13	5	13	9	10	4	10
		USD/GSD/SAT	GSD	GSD	USD	USD	USD	USD	USD	USD	SAT	USD
		Davidson County Grid	-	102	148	148	061, 072	-	93	104	25	104
		Private/Metro Hauler	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	WM Antioch TS										
		Date:	7/26/17										
		Material Group Sample ID:	MRES1	MRES2	MRES3	MRES4	MRES5	MRES6	MRES7	MRES8	MICI1	MICI2	MICI3
PAPER	**1**	Newsprint	7.6	2.7	5.8	11.1	2.8	1.7	1.7	2.9	0.2		
	2	High Grade Office Paper	23.4		0.3	0.2	5.7	1.4	0.7	0.2		0.2	6.7
	3	Magazines/Catalogs	1.8	0.9	0.4	0.4	0.6	3.9	5.1	2.8			
	4	Uncoated OCC	10.4	46.2	4.5	6.4	6.5	0.4	1.9	4.9	0.8	17.5	46.8
	5	Kraft	0.2	0.7			0.2	0.4	0.2	0.3			9.5
	6	Boxboard	3.8	2.7	12.2	4.6	9.4	4.2	6.6	6.6	1.4		
	7	Mixed Paper - Recyclable	2.7	2.6	7.3	5.4	6.3	5.8	4.8	2.4	1.8	0.4	
	8	Compostable Paper and 'other' paper	27.4	13.1	20	17	22	28.6	22.8	15.6	4.4	253.3	5.4
	9	Milk and Juice cartons/boxes, coated	0.4				1	1.5	0.8	0.8		0.8	
PLASTICS	**10**	#1 PET Bottles/Jars	3.8	2.8	8	3.9	9.9	4.1	2	3.5		0.1	0.1
	11	#1 Other PET Containers & Packaging	0.7	2.4	0.3		0.8	0.3	0.5	0.1	0.1	0.7	
	12	#2 HDPE Bottles/Jars - Clear		0.8	0.3	0.5	4.2	0.5	0.3	0.6			
	13	#2 HDPE Bottles/ Jars - Color	2	0.3	1.3		2.4	1.6	1.9	0.6		0.6	
	14	#2 Other HDPE Containers & Packaging											
	15	#6 Expanded Polystyrene Packaging (EPS)	3	1	4.3	1.9	6.1	1.8	1.8	2	0.1	0.1	1
	16	#3-#7 Other - All	5.4		6	6.8	9.6	4.1	4.7	4			
	17	Other Rigid Plastic Products	0.9	1.4	3	18.5	1.2	0.5	1.6	4.7	3.9		
	18	Grocery & Merchandise Bags	1.3	2.2	5.6	2.8	3.9	1.7	1.6	2.4	1.3		
	19	Trash Bags	4.4	1.4	4.6	3.6	3.7	2.9	3.5	2.4	2.5	0.7	
	20	Commercial & Industrial Film										3.7	21.2
	21	Other Film	6.2	2.4	8.1	7.8	9.1	6.6	6.3	6.2	1.3	1.6	
	22	Remainder/ Composite Plastic	3.8	0.6	2.5	1.8	2.8	1.4	4	7.2	3		
GLASS	**23**	Glass Bottles and Jars - **clear**	7.7	7.1	11.5	1.7	23.2	2.4	6	1.7	0.6		
	24	Glass Bottles and Jars - **brown**	3.3	0.7	5.5	1.2	3.9	3.7	0.4				
	25	Glass Bottles and Jars - **green**	3.3	1.8	1.1		1.5	12.5	5.4				
	26	Glass Bottles and Jars - **blue**											
	27	Flat Glass									4		
	28	Other Glass								1.5			
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.8	0.2	1.4		0.2	0.5	0.1	15.4			
	30	Yard Waste - Woody; branch >0.5"											
	31	Food Scraps	49.2	17	66.9	13.2	53.7	75.2	65	45.3		14.1	0.1
	32	Bottom Fines and Dirt	0.6			25.2		0.1	0.4				
	33	Diapers	23.3	3.6	11.6	14.3	6.1	1.7	17.7	16.8			
	34	Other Organic	2.2	47	1.3	29.3	7	7.8	58.8	7.1	0.4		
METALS	**35**	Aluminum Beverage Containers	0.9	0.9	3.4	1.5	1.6	0.4	0.7	0.9	0.1	0.3	
	36	Other Aluminum	0.5	0.1	1.4	0.2	1.3	0.9	0.3	0.7			
	37	Ferrous containers (bi-metal cans)	1.6	0.7	2.4	4.5	2.3	1.6	0.9	1.2	0.8		
	38	Aerosol cans	0.9	0.2		0.5	0.7	0.9	0.1	0.3			
	39	Other Ferrous	0.7		0.7			4.5			0.5		
	40	Other Non-Ferrous									1.3		
	41	Other Metal	0.5	2.8		14.3		0.5	1.8				
TEXTILES	**42**	Carpet and carpet padding											
	43	Clothing and other textiles	3	4.5	12.6	13.8	5.3	1.5	5	10.1	146	7.9	
C&D	**44**	Construction and Demolition materials	39.3	2.9	5	0.8	2.5	3.7			52.3	13.2	132.1
MISC INORG.	**45**	Televisions											
	46	Computer Monitors											
	47	Computer Equipment/ Peripherals									0.4		
	48	Electronic Equipment	0.3			10.6	0.4	0.4	0.3	0.7	9.1		
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.5	0.8		5.3		0.9	0.6	3.5	36.5		
HHW	**50**	Household Hazardous Waste materials	0.1	0.4	0.5	0.2	2.2	2.4	1.9	0.6	1.7		
SAMPLE DETAILS		Sample Name	MRES1	MRES2	MRES3	MRES4	MRES5	MRES6	MRES7	MRES8	MICI1	MICI2	MICI3
		Sample Size (pounds)	247.9	174.9	219.8	229.3	220.1	195	238.2	176	274.5	315.2	222.9
		Truck Number	251	10322	H17	E88	251	3910	4044	15	414208	212912	414025
		Time	6:03	6:43	7:17	7:43	9:01	10:05	12:17	13:30	10:00	11:48	12:58
		Davidson County Subarea	10	6	8	14	13	10	10	13	8	13	13
		USD/GSD/SAT	USD	GSD	USD	GSD	USD	SAT	SAT	USD	USD	USD	USD
		Davidson County Grid	92	-	-	-	-	145, 159	-	-	81	-	163
		Private/Metro Hauler	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	WM Antioch TS										
		Date:	7/27/17										
		Material Group	Sample ID:	NRES1	NRES2	NRES3	NRES4	NICI1	NICI2	NICI3	NICI4	NICI5	NICI6	NICI7
PAPER	**1**	Newsprint		1.2	6.6	9.1	2.2	2.2	0.1	0.6	0.3	0.2	2.1	0.2
	2	High Grade Office Paper		1	0.7	1	6.5	0.9	0.8	0.2	0.1		2.1	0.1
	3	Magazines/Catalogs		0.8	1.2	4	10.3	0.2						
	4	Uncoated OCC		5	10.4	15.2	7.6	11.7	18	19.5	38.9	1.3	31.3	52.4
	5	Kraft		0.2	0.5	0.5	2.1	0.3		0.1	0.1		0.6	35.9
	6	Boxboard		4.8	7.2	8.6	7	6	6.2	4.6	0.6	0.7	6	7.6
	7	Mixed Paper - Recyclable		8.6	2.6	9.6	9.3	3.6	2.4	5.9	1.2	0.4	9.8	
	8	Compostable Paper and 'other' paper		16.2	19.2	26.8	15.1	13.6	9.6	32	4.7	24.2	13.8	7.2
	9	Milk and Juice cartons/boxes, coated		0.8	0.9	0.9	0.9	0.3		0.2			0.3	
PLASTICS	**10**	#1 PET Bottles/Jars		3.9	7.1	5.6	2.7	2.9	4.3	3.1	3	0.7	1.5	
	11	#1 Other PET Containers & Packaging		1	0.8	0.5	1	0.6	0.1	2		0.1	0.4	
	12	#2 HDPE Bottles/Jars - Clear		0.4	0.3	1.4	0.7	1		0.6	0.6	0.1	0.7	
	13	#2 HDPE Bottles/ Jars - Color		0.9	1.8	1.2	0.6	0.6	0.2	0.3	0.7	0.3	0.7	
	14	#2 Other HDPE Containers & Packaging										0.1		
	15	#6 Expanded Polystyrene Packaging (EPS)		1.5	2	2.8	0.5	3.3	2.3	0.9	1.7	0.3	1.1	
	16	#3-#7 Other - All		2.1	3.4	5.9	3.8	6.6	1.5	4	0.8	0.9	3.3	
	17	Other Rigid Plastic Products		1.2	1.4	5	0.6	0.6	48.4	5.1	1.9	3.8	0.3	11.6
	18	Grocery & Merchandise Bags		2.3	3	3.2	1.1	2.3	0.6	1	0.5	0.4	2.1	
	19	Trash Bags		1.2	3.5	4	3.1	4.2	3.3	5.2	2.1	0.8	1.6	19.9
	20	Commercial & Industrial Film								9.4	10.9			24
	21	Other Film		3.8	6.3	6.9	5.9	4.9	9.2	12.6	3.3	0.6	3.8	2.1
	22	Remainder/ Composite Plastic		8.6	3	6.8	4.9	0.6	56.4	3.6	4	26.7	1.5	24.1
GLASS	**23**	Glass Bottles and Jars - **clear**		4.1	6.1	8.1	7.4	13.7	1	2	1.4	0.1	2.6	
	24	Glass Bottles and Jars - **brown**		2.6	3.6	6.1	1.9	5.3		0.8	0.4		3.5	
	25	Glass Bottles and Jars - **green**		2	3.2		2.4	1.4		1.6			1.4	
	26	Glass Bottles and Jars - **blue**												
	27	Flat Glass										0.9	0.5	
	28	Other Glass		0.5		0.6			0.1					
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"		7		0.6	6.2			0.9	0.1		5.6	
	30	Yard Waste - Woody; branch >0.5"		4.2			0.9			1.7				
	31	Food Scraps		33.3	56.2	67.1	85.2	46.1	9	75	7.1	1.8	28.6	5.7
	32	Bottom Fines and Dirt		0.4	1.2	0.3			1.2	3.3	14.6	0.6	0.9	
	33	Diapers		1.7	3.5	3.5	10.1	14.9		0.5		0.9	1.7	
	34	Other Organic		12.7	3.4	9.3	1.8	0.4		4.1			3.5	
METALS	**35**	Aluminum Beverage Containers		0.9	2.3	2.5	1	3.5	0.8	1.3	0.4	0.7	1.2	
	36	Other Aluminum		0.5	0.5	0.8	1.4	0.7	0.4	1.6	0.1	0.8	0.2	
	37	Ferrous containers (bi-metal cans)		3.6	6.5	2	1.1	2	0.8			0.4		
	38	Aerosol cans		0.5	0.2	1.1	0.4		1.5	0.4			0.2	
	39	Other Ferrous		0.1		0.1			31.5	0.6			0.3	
	40	Other Non-Ferrous							5.6	4.9				
	41	Other Metal		2.5	1.6	0.9	0.3		7.8		1.7	0.2	3.8	
TEXTILES	**42**	Carpet and carpet padding											0.5	
	43	Clothing and other textiles		6.3	7.8	4.8	1.5	67	5.6		6.1	2.8	1	13.3
C&D	**44**	Construction and Demolition materials		19.2	0.4	8.9			8.2	2.6	23.9	13.7	22.4	2.4
MISC INORG.	**45**	Televisions												
	46	Computer Monitors												
	47	Computer Equipment/ Peripherals							5.8					
	48	Electronic Equipment		2.8	0.8	3.4	1.1				2		0.9	
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics			1.8		41			0.1		150.3	20.6	
HHW	**50**	Household Hazardous Waste materials			0.5	0.6	3.1		0.1	2.1	4.7			
SAMPLE DETAILS		Sample Name		NRES1	NRES2	NRES3	NRES4	NICI1	NICI2	NICI3	NICI4	NICI5	NICI6	NICI7
		Sample Size (pounds)		170.4	181.5	239.7	252.7	221.4	242.8	214.4	137.9	234.8	182.4	206.5
		Truck Number		E88	255	20	3910	414025	3704	403	511517	414466	414467	114586
		Time		7:30	8:05	10:49	11:10	6:06	6:15	6:32	7:01	8:32	10:10	12:50
		Davidson County Subarea		6	12	6	10	12	5	14	5	13	6	13
		USD/GSD/SAT		GSD	GSD	GSD	SAT	USD	USD	GSD	USD	USD	USD	USD
		Davidson County Grid		-	-	-	-	162	-	-	71	120	128	175
		Private/Metro Hauler		Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private

Nashville Summer 2017 Event Raw Data (in pounds)

		Facility:	WM Antioch TS									
		Date:	7/28/17									
		Material Group	Sample ID:	ORES1	ORES2	ORES3	ORES4	OICI1	OICI2	OICI3	OICI4	OICI5	OICI6
PAPER	**1**	Newsprint		3.5	12	12.7	1.9		0.1				3.4
	2	High Grade Office Paper		0.5	0.2	0.6	0.3	0.2	0.1				1.2
	3	Magazines/Catalogs		7.4	2.9	4.8		8.5		4.3			1.8
	4	Uncoated OCC		2	4.7	3.7	3.3	15.4	72.4	3.8	10.3	34.3	10.3
	5	Kraft		1.4	0.9	1.8	0.4		0.9		8.8	3.1	1.7
	6	Boxboard		5.3	9	4.6	9.3	10	7	1.6	3.1		10.3
	7	Mixed Paper - Recyclable		3.8	3.6	5.5	5	1.8	0.7	6	0.2		8.1
	8	Compostable Paper and 'other' paper		21.6	21.2	17.8	17.7	32.5	21.8	10.3	3.5	1.9	34.1
	9	Milk and Juice cartons/boxes, coated		1.9	1.7	0.9	1	0.4	0.5				0.9
PLASTICS	**10**	#1 PET Bottles/Jars		3.7	5	4.7	6.4	3.3	1.7		0.6	0.1	5.3
	11	#1 Other PET Containers & Packaging		1.7	0.6	2	1.9	2.5	0.5		0.8		2.7
	12	#2 HDPE Bottles/Jars - Clear		0.5	0.7	0.8	0.6	1.5	0.4			0.4	0.4
	13	#2 HDPE Bottles/ Jars - Color		1.2	2.8	1.2	1.8	1.3	5.4				0.8
	14	#2 Other HDPE Containers & Packaging											
	15	#6 Expanded Polystyrene Packaging (EPS)		1.9	3.2	1.6	2.8	1.5	5.9		0.6		3.2
	16	#3-#7 Other - All		4.1	3.8	5.9	5.2	7.6	4		0.2		6.3
	17	Other Rigid Plastic Products		0.5	0.4	0.4	0.8	1.8	0.4	17.1			0.5
	18	Grocery & Merchandise Bags		2.6	3	2	2.7	3	0.4	0.1	0.1		4.5
	19	Trash Bags		5.1	4.2	4	3.7	8	6.3	0.1	0.2	0.4	5.9
	20	Commercial & Industrial Film										8.5	
	21	Other Film		5.8	4.9	4.7	7.8	9.1	15	0.7	1.2	1.8	7.4
	22	Remainder/ Composite Plastic		3.8	14.3	2.6	1.4	2	2.3	70.3		8.6	1.1
GLASS	**23**	Glass Bottles and Jars - **clear**		15	3	11	11.5	14.3	4.5		0.5		5.9
	24	Glass Bottles and Jars - **brown**		7.1	1.8	9.6	2.8	2.9					6.3
	25	Glass Bottles and Jars - **green**		7	1.6	8.6	5.4	16.4	2.7				14.3
	26	Glass Bottles and Jars - **blue**					1.3						2.2
	27	Flat Glass								0.8		200	1.2
	28	Other Glass											3.8
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"		12.4	0.4	7.2	1	0.1	0.1	0.3			1.1
	30	Yard Waste - Woody; branch >0.5"											
	31	Food Scraps		62	49.1	77.8	75.9	62.4	47.6		4.2		55.3
	32	Bottom Fines and Dirt		0.3	0.4	0.4	0.6					6.6	1.8
	33	Diapers		6.8	10.7	2.9	12.6			0.6			3.2
	34	Other Organic		3.7	12.9	2.4	6	0.9	0.7	2.5		5.9	3
METALS	**35**	Aluminum Beverage Containers		1.2	1.2	2.2	1.4	4	0.5		0.1		2.2
	36	Other Aluminum		0.5	0.5	2.3	2.1	1.6	2.7		0.1		0.8
	37	Ferrous containers (bi-metal cans)		3.7	2.6	1.2	1.6	1.4	1.2		0.4		0.8
	38	Aerosol cans		0.4	0.8		1						0.3
	39	Other Ferrous		0.1			0.4	0.5		3.7		2.1	2.2
	40	Other Non-Ferrous								1.6			
	41	Other Metal			0.5					1.1			
TEXTILES	**42**	Carpet and carpet padding											
	43	Clothing and other textiles		8.9	1	0.6	1.8	13.5	3	30.8			3.1
C&D	**44**	Construction and Demolition materials									282.3	100.8	0.3
MISC INORG.	**45**	Televisions											
	46	Computer Monitors											
	47	Computer Equipment/ Peripherals		0.9									0.5
	48	Electronic Equipment			0.4		0.3	0.5		13.6			
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics				1.3		1.4	0.2	118.1			2.6
HHW	**50**	Household Hazardous Waste materials		0.1	1			1.6		0.1			0.3
SAMPLE DETAILS		Sample Name		ORES1	ORES2	ORES3	ORES4	OICI1	OICI2	OICI3	OICI4	OICI5	OICI6
		Sample Size (pounds)		208.4	187	209.8	199.7	231.9	209	287.5	317.2	374.5	221.1
		Truck Number		4044	4	497	4044	414216	3704	414216	211517	414583	211515
		Time		9:45	11:06	12:05	12:28	6:24	7:10	7:45	8:53	8:46	9:40
		Davidson County Subarea		10	8	6	13	11	9	11	11	7	7
		USD/GSD/SAT		SAT	USD	GSD	USD	SAT	USD	SAT	SAT	USD	USD
		Davidson County Grid		-	81	-	-	118	93	118	118	-	-
		Private/Metro Hauler		Private	Private	Private	Private	Private	Private	Private	Private	Private	Private

Appendix C
Tabulated Sample Data - Fall 2017 Event

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF
		Date:	10/9/17	10/9/17	10/9/17	10/9/17	10/9/17	10/9/17	10/9/17	10/9/17	10/9/17
	Material Group	Sample ID:	PRES1	PICI1	PICI2	PICI3	PICI4	PICI5	PICI6	PICI7	PICI8
PAPER	**1**	Newsprint	20.9	0.1	0	0	0	0	0.7	1.9	0
	2	High Grade Office Paper	10.4	0	4.6	0	0	2.5	0	0.7	0.4
	3	Magazines/Catalogs	39.8	0	3.8	0	0.2	2.1	0.6	1.9	0
	4	Uncoated OCC	22.4	223.5	213.1	208.6	186	139.6	172.4	225.7	106.6
	5	Kraft	1.6	0	0.6	0	0	0.1	0	0	0
	6	Boxboard	16.2	78.1	19.9	6.9	13.9	19.5	6.1	29	132.6
	7	Mixed Paper - Recyclable	20.2	0	2.9	0	0.1	0.1	0	1.3	0
	8	Compostable Paper and 'other' paper	1.3	0.1	14.2	2.9	0	3.2	4	0.2	0
	9	Milk and Juice cartons/boxes, coated	2.3	0	0	0	0	0.1	0.1	0	0
PLASTICS	**10**	#1 PET Bottles/Jars	7.2	0.1	0.5	0	0.1	12	0.2	1.6	0.1
	11	#1 Other PET Containers & Packaging	3.4	0	1.3	0	0.2	0	0	0	0
	12	#2 HDPE Bottles/Jars - Clear	3.5	0	0.1	0	0	0	1	1.2	0
	13	#2 HDPE Bottles/ Jars - Color	3.9	0	0.3	0	0.4	0.3	0	0	0
	14	#2 Other HDPE Containers & Packaging	0	0	0.2	0	0	0	0	0.4	0
	15	#6 Expanded Polystyrene Packaging (EPS)	0.7	0	0.1	0	0.2	0.4	4.2	0.1	0
	16	#3-#7 Other - All	4.9	0	0.1	0	0.1	3.9	0	0.7	0
	17	Other Rigid Plastic Products	1.2	0	0.3	0.3	0	2.7	4.4	0.2	0
	18	Grocery & Merchandise Bags	1.6	0.1	0.1	0	0	0.2	0.5	0.1	0
	19	Trash Bags	0.5	0.2	0.4	0	0.2	3.4	0.1	0.2	0.1
	20	Commercial & Industrial Film	0	0	0	0.1	0.7	0	0	0	0.4
	21	Other Film	4.8	2.7	1.2	0.1	0.4	3.4	2.1	0.4	0
	22	Remainder/ Composite Plastic	1.5	0	0.6	0	0	0.7	0	0	0
GLASS	**23**	Glass Bottles and Jars - **clear**	7	0	7.3	0	0	2.5	0.4	0.2	0
	24	Glass Bottles and Jars - **brown**	2.5	0	9.6	0	0	0	0	0.2	0
	25	Glass Bottles and Jars - **green**	1	0	6	0	0	0	0	0.9	0
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0	0	0	0
	27	Flat Glass	0	0	0	0	0	0	0	0	0
	28	Other Glass	0.2	0	0.2	0	0	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0	0	0.1	0	0	0.1	0	0.3	0
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	0	0	0	0	0
	31	Food Scraps	0	0	0.3	1.3	0	10.8	0	0.1	0
	32	Bottom Fines and Dirt	1.5	0	0	0	0	0	0	0	0
	33	Diapers	0	0	0	0	0	0	0	0	0
	34	Other Organic	0.1	0	0.5	0	0	0.2	0	0	0
METALS	**35**	Aluminum Beverage Containers	0.9	0.1	7.3	0	0	4.5	0.2	0.4	0
	36	Other Aluminum	0.2	0	0	0	0	0	0.1	0	0
	37	Ferrous containers (bi-metal cans)	0.4	0	0.3	0.2	0	0	0.6	0.1	0
	38	Aerosol cans	0.8	0	0	0	0	0	0	0.4	0
	39	Other Ferrous	3.6	0	0.1	0	0.1	0	0	0	0
	40	Other Non-Ferrous	0	0	0	0	0	0.4	0	0	0
	41	Other Metal	0.4	0	0.1	0	0.4	0	0	0	0
TEXTILES	**42**	Carpet and carpet padding	0.6	0	0	0	0	0	0	0	0
	43	Clothing and other textiles	0	0	0.1	0	0	0.2	0	0	0
C&D	**44**	Construction and Demolition materials	0	0	0.2	0	1.1	11.4	88.4	0	0
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	0	0	0
	48	Electronic Equipment	0	0	0.5	0	0	0	0.2	0	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0.1	0	0.1	0	0	0	0	0	0
HHW	**50**	Household Hazardous Waste materials	0	0	0.6	0	0	0	0	0.1	0
SAMPLE DETAILS		Sample Name	PRES1	PICI1	PICI2	PICI3	PICI4	PICI5	PICI6	PICI7	PICI8
		Sample Size (pounds)	187.6	305	297.6	220.4	204.1	224.3	286.3	268.3	240.2
		Truck Number	504	4749	211520	209930	414215	211476	211520	2420	414024
		Time	12:27	7:50	8:33	8:59	10:24	11:43	14:11	14:15	14:47
		Davidson County Subarea	6	9	9,10,11	OSA	11	4	6	9	11
		USD/GSD/SAT	GSD	USD	USD	GSD	USD	USD	GSD	USD	USD
		Davidson County Grid	142	93	104	OSA	119	51	124	93	106
		Private/Metro Hauler	Private	Metro	Private	Private	Private	Private	Private	Metro	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF
		Date:	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17
	Material Group	Sample ID:	QRES1	QRES2	QRES3	QRES4	QRES5	QRES6	QRES7	QICI1	QICI2	QICI3	QICI4
PAPER	**1**	Newsprint	14.6	51.7	7.1	5.8	20.5	28.9	52.1	0.7	0	0	0.5
	2	High Grade Office Paper	0.8	14.6	225.1	0.9	3.3	0.2	5.1	0.1	0.4	0	0.6
	3	Magazines/Catalogs	9.7	7.6	11.1	9.1	44.1	5.3	31.4	0	0.4	0	0.9
	4	Uncoated OCC	113.3	61.2	44.1	64.2	53.9	53.6	51.9	183	198.8	214.1	129
	5	Kraft	1.7	3.7	1.2	2	4.4	1.6	1.9	0	0.4	0.5	2.8
	6	Boxboard	9.7	26.9	7.4	10.2	24.9	18.5	16.2	8.2	1.1	0.2	8.9
	7	Mixed Paper - Recyclable	7.3	6.5	19.2	9.4	18.6	5.1	33.5	0.2	0.3	0	1.6
	8	Compostable Paper and 'other' paper	2.5	10	5.2	3.9	5.7	7.5	7.6	1.7	4.2	0.7	8.1
	9	Milk and Juice cartons/boxes, coated	1.8	0.6	0	1.5	1.9	0.6	0.9	0	0.1	0	0.5
PLASTICS	**10**	#1 PET Bottles/Jars	6.7	12.4	3.6	7.5	7.4	11.3	15.7	0.4	0.5	0.2	3.8
	11	#1 Other PET Containers & Packaging	0.5	1	0.3	1.2	1	0.9	1.1	0	0.3	0	0.4
	12	#2 HDPE Bottles/Jars - Clear	2.7	1	0.6	2.5	2.3	2.4	1.3	0	0	0.2	1.6
	13	#2 HDPE Bottles/ Jars - Color	0.8	2.4	0.4	2.2	4.7	1.2	3.6	0	0.2	0	0.8
	14	#2 Other HDPE Containers & Packaging	0	0	0	0	0	0.2	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	1.9	1.5	0.1	1.8	0.2	0.3	0.7	0.1	0.4	0.2	0.1
	16	#3-#7 Other - All	1.6	3.7	0.5	3.1	4.5	2.4	4	0.3	0.5	0.1	0.9
	17	Other Rigid Plastic Products	3	0.7	0.2	1.3	0.4	0.8	3.4	0.4	0	8.4	0.1
	18	Grocery & Merchandise Bags	1	1.3	0.1	0.4	0.2	1.1	0.6	0	0.1	0.1	0.1
	19	Trash Bags	1	2.6	0	0.3	0.4	1.5	0.6	0	0.8	0.3	0.7
	20	Commercial & Industrial Film	0	0	0	0	0	0	0	0	0	0	7.1
	21	Other Film	13.5	4.3	3.9	2.3	2.2	1.5	3.3	0.4	0.6	0.3	69.2
	22	Remainder/ Composite Plastic	0.4	1.5	0.1	4.6	0.4	0.5	1.7	0.5	0.3	0	0
GLASS	**23**	Glass Bottles and Jars - **clear**	0.4	9.6	0.1	1.5	11.4	8.4	4.4	0	0	1	0
	24	Glass Bottles and Jars - **brown**	0.3	25.2	0	0.4	2	4.5	1	0.1	0	0.1	0
	25	Glass Bottles and Jars - **green**	0	10.7	0	1.9	6.4	0	0.9	0	0	0	0
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0	0	0	0	0	0
	27	Flat Glass	0	0	0	0	0	0	0	0	0	0	0
	28	Other Glass	0	0	0	0	1.3	1.2	0	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0	0.1	0	0.1	0	0	0.1	0	0	0.1	0.1
	30	Yard Waste - Woody; branch >0.5"	0.3	0	0	0	0	0	0	0	0	0	0
	31	Food Scraps	0	20.7	0.1	1.9	2.1	5.2	6.2	0.3	0.8	0.2	0
	32	Bottom Fines and Dirt	1.8	1.1	0	0	0.2	0.1	0	0.4	0	0.1	0
	33	Diapers	0	0.8	0	0	0	0.4	0.4	0	0	0	0
	34	Other Organic	0	0.4	0.1	0.2	0.1	0.4	0.2	0	0	0.1	0
METALS	**35**	Aluminum Beverage Containers	0.8	8.7	0.9	4	2.6	3.2	4.1	0.1	0.1	0.2	2
	36	Other Aluminum	0.1	0.9	0	0.2	0.1	0.7	0.1	0.1	0.1	0	0.1
	37	Ferrous containers (bi-metal cans)	1.8	2	0.1	6.1	3.2	2.6	11.5	0.1	0	0	0.3
	38	Aerosol cans	0	0	0	0	0.7	0.4	0.5	0	0.1	0	0
	39	Other Ferrous	0	0	0	0	1.2	0.3	0	0.1	0	0.3	0
	40	Other Non-Ferrous	0.1	0	0	0	0	0	0	0	0	0	0
	41	Other Metal	0	0	0	0.3	1.4	0	0.8	0.6	0	0	0
TEXTILES	**42**	Carpet and carpet padding	0	0	0	0	0	0	0	0	0	0	0
	43	Clothing and other textiles	0	4.3	0	0.4	0.1	7	3.3	0	0	0	0.2
C&D	**44**	Construction and Demolition materials	4	1.2	0.2	2	1.4	0	0.9	0.2	0	2.3	7.4
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	0	0	0	0	0
	48	Electronic Equipment	3	0	0	1.2	0	0	0.6	0	0	0	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0	3.1	0	0	0	8.7	0.1	0	0	0	0
HHW	**50**	Household Hazardous Waste materials	0	1	0	0	0.4	0.2	0.3	0	0	0	0.3
SAMPLE DETAILS		Sample Name	QRES1	QRES2	QRES3	QRES4	QRES5	QRES6	QRES7	QICI1	QICI2	QICI3	QICI4
		Sample Size (pounds)	207.1	305	331.7	154.4	235.6	188.7	272	198	210.5	229.7	248.1
		Truck Number	4949AH	08C2420	4907	08C2380	4855AH	08C2126	08C2498	211467	414534	211520	209930
		Time	9:01	9:47	10:22	10:54	11:20	12:40	2:01	7:27	7:31	8:07	8:36
		Davidson County Subarea	7	5	10	5	5	5	3	7	12	10	9
		USD/GSD/SAT	USD	USD	USD	USD	USD	USD	USD	SAT	USD	USD	USD
		Davidson County Grid	115	60	104/105	83	72	71	60	130	160	104	93
		Private/Metro Hauler	Metro	Metro	Metro	Metro	Metro	Metro	Metro	WM	WM	WM	WM

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF
		Date:	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17
	Material Group	Sample ID:	RRES1	RRES2	RRES3	RRES4	RRES5	RRES6	RRES7	RRES8	RICI1	RICI2	RICI3
PAPER	**1**	Newsprint	38.7	66.5	8.5	5.9	30.4	8.2	2.4	46.3	0	2	4.1
	2	High Grade Office Paper	7.1	7	1.9	3.8	3.9	2.6	1.8	8.8	0	0	0.4
	3	Magazines/Catalogs	67.8	112.7	28.8	13.5	39	23.6	12.6	52.3	0.7	1.5	4.8
	4	Uncoated OCC	47.5	24.1	57	27.4	40.8	49.6	26.8	31.7	224	151	201.9
	5	Kraft	3.2	1.9	2.7	2.6	5.6	5.5	1.8	8.9	0	0.6	1.2
	6	Boxboard	8.2	7.9	18.3	19.8	11.1	10.5	22.2	17.4	4	3.5	3.6
	7	Mixed Paper - Recyclable	12.5	19	12.8	4.4	5.1	10.8	6.9	21.2	0	1.1	0.9
	8	Compostable Paper and 'other' paper	8.3	5.4	20.3	17.1	5	2.8	5.5	3.4	2.3	2.6	4.6
	9	Milk and Juice cartons/boxes, coated	1	1.1	0.7	0.2	1.5	0.4	0.5	0	0	0.6	0.4
PLASTICS	**10**	#1 PET Bottles/Jars	3.8	4.8	8.6	4.9	4.2	3.5	8.3	6.5	0	1.2	1.2
	11	#1 Other PET Containers & Packaging	1.6	1.4	2.4	2	2	1.2	0.9	2.6	0.3	0	0.9
	12	#2 HDPE Bottles/Jars - Clear	1.1	1.1	2.2	0.4	0.6	0.3	2.7	3	0.2	0.1	0.3
	13	#2 HDPE Bottles/ Jars - Color	0.5	1.4	3	0.8	2.9	1.1	2.4	2.2	0.2	0	0
	14	#2 Other HDPE Containers & Packaging	0	0	0	0	0	0	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	0.2	0.3	0.4	6.7	0.2	0.2	0.4	0.1	0.3	0.6	0.4
	16	#3-#7 Other - All	9	3.1	2.4	5.5	2.6	1.1	2.6	2.3	0.4	0.3	0.6
	17	Other Rigid Plastic Products	0.4	3.4	1.4	2.3	2.2	0.4	1.6	0.4	0.1	2.6	0.1
	18	Grocery & Merchandise Bags	0.5	0.3	2.2	0.4	0.2	0.2	0.7	0.4	0	0.3	0.1
	19	Trash Bags	0.1	0.2	1.5	4.8	0.1	0.1	0.2	0.2	0	0.1	2.8
	20	Commercial & Industrial Film	0	0	0	0	0	0	0	0	0	0	0.5
	21	Other Film	3	1.3	5	5.8	1.8	0.9	1.5	2.4	1.4	1	3.9
	22	Remainder/ Composite Plastic	0.6	1.2	2.9	0.5	1.6	0	0.9	1.7	0.1	0.2	0
GLASS	**23**	Glass Bottles and Jars - **clear**	5.4	2.2	8.3	23.7	0.1	1.6	5.9	3.7	0.4	0	0.4
	24	Glass Bottles and Jars - **brown**	2.8	0	7	60.9	0	0.4	1.6	1	0	0	0.7
	25	Glass Bottles and Jars - **green**	2.1	0	11	4.9	0	0	0	0	0	0	1.5
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0	0	0	0	0	0
	27	Flat Glass	0	0	0	0	0	0	0	0	0	0	0
	28	Other Glass	0	0	0	0	0	0.1	0	0.1	0	1.4	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0	0	0.1	0.3	0	0.2	0.2	0	0.1	0	0
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	0	0	0.1	0	0	0	0
	31	Food Scraps	0.9	0.1	0	19.2	0.5	0	0.2	0.1	0	1	4.8
	32	Bottom Fines and Dirt	0	0.1	4.7	2.4	0	1	0	0	0	0	0
	33	Diapers	0	0.3	0	0.3	1.3	0	1.7	0	0	0	0
	34	Other Organic	0	0.1	4.1	0.1	0	0.6	0	0.1	0.1	0.1	0.1
METALS	**35**	Aluminum Beverage Containers	1.8	1.7	6.5	3.4	1.8	2.1	4.4	5	0	0.1	0.3
	36	Other Aluminum	0.2	0.1	0.4	3.8	0.2	0.1	0.2	0.3	0	0.3	0.1
	37	Ferrous containers (bi-metal cans)	2	1.8	4.5	1.3	2.3	2.4	2.2	4.6	0.2	0.4	0.1
	38	Aerosol cans	0	0.3	0	0	0	0	0	0.2	0	0	0
	39	Other Ferrous	0	1.1	20.9	0.4	0.4	0	0.3	0.2	0.8	0	0.1
	40	Other Non-Ferrous	0	0	0	0	0	0	0	0	0	0	0
	41	Other Metal	0.3	2.8	4.2	1	0	0.1	0	0	0	0	0
TEXTILES	**42**	Carpet and carpet padding	0	0	0	0	0	0	0	0	0	0	0
	43	Clothing and other textiles	0	0.6	1.6	1.3	0.4	0.2	2.4	0	0.2	0	0.3
C&D	**44**	Construction and Demolition materials	0.2	0	1.1	0	66.9	0	0	0.8	0	0.2	0
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	0	0	0	0	0
	48	Electronic Equipment	0	0	0	0	0	0	0.2	0	0	1.1	0.1
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0	1.8	7.9	0	0	0	0	0.1	0	0	0
HHW	**50**	Household Hazardous Waste materials	0.7	0	3.7	0	0.1	0	0	0	0.1	0	0
SAMPLE DETAILS		Sample Name	RRES1	RRES2	RRES3	RRES4	RRES5	RRES6	RRES7	RRES8	RICI1	RICI2	RICI3
		Sample Size (pounds)	231.5	277.1	269	251.8	234.8	131.8	122.1	228	235.9	173.9	241.2
		Truck Number	4907	2364	2307	08C2125	08R1560	4906AG	4759AG	08C2381	209930	212740	211520
		Time	9:43	9:46	9:48	10:17	11:28	1:42	2:01	2:50	9:50	11:28	12:33
		Davidson County Subarea	10	10	7	7	7/10	10	10	7	9	11	6
		USD/GSD/SAT	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
		Davidson County Grid	117	116	103	102	104	104	92	103	93	119	128
		Private/Metro Hauler	Metro	Metro	Metro	Metro	Metro	Metro	Metro	Metro	WM	WM	WM

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF
		Date:	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17
	Material Group	Sample ID:	SRES1	SRES2	SRES3	SRES4	SRES5	SRES6	SRES7	SICI1	SICI2	SICI3	SICI4
PAPER	**1**	Newsprint	16.6	5	30.4	17.6	17	0.2	15	9.8	0	0.6	0.6
	2	High Grade Office Paper	5.8	7.6	4.6	20.1	11.5	20.4	11.9	34.2	4.5	2.8	3.9
	3	Magazines/Catalogs	30.4	43	16.6	29.4	36.3	14.7	65.9	11.3	0	7.3	2.7
	4	Uncoated OCC	75.4	93.5	62.5	112.6	33	73.4	78.2	184.4	217.2	205.1	137.6
	5	Kraft	4.2	8.6	5.2	5.3	3.8	13.9	4	0	0.9	6.7	1
	6	Boxboard	23	31.9	12.7	23.6	15	20.7	38.4	3.1	0	11.2	13.2
	7	Mixed Paper - Recyclable	0	13.7	10.8	15.8	21.5	5	19.1	8.3	0	4.9	1.8
	8	Compostable Paper and 'other' paper	13.7	13.8	2.7	7.5	9.1	9.3	15.4	13.4	0.4	4	3.7
	9	Milk and Juice cartons/boxes, coated	1.5	3.5	0.1	2	0.6	0.6	1.5	0	0	0.5	0.9
PLASTICS	**10**	#1 PET Bottles/Jars	4.5	12.9	6.4	6.7	5	3.8	10.4	2.2	0.1	2.8	5.8
	11	#1 Other PET Containers & Packaging	2	4.9	1.5	0.9	0.9	1	2	0	0	1	0.8
	12	#2 HDPE Bottles/Jars - Clear	0.8	3.3	1.9	2	1.3	0	2.3	0.2	0	1	1.9
	13	#2 HDPE Bottles/ Jars - Color	1.9	3.9	0	3	1	0.7	2.9	0.5	0	0.8	0.6
	14	#2 Other HDPE Containers & Packaging	0.2	0	0	0	0	0	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	1.1	1.1	0.3	0.4	0.1	0.7	0.9	0.5	0.2	0.1	2
	16	#3-#7 Other - All	1.6	7.1	1.2	2.4	0.7	1.8	4.1	1.1	0	1.1	1.2
	17	Other Rigid Plastic Products	0.9	3.9	0.7	1	0.4	0.8	2.6	17	0	2.3	6.1
	18	Grocery & Merchandise Bags	0.2	2.2	0.5	1.1	0.2	0.2	0.6	0.2	0	0.3	0.6
	19	Trash Bags	0.1	3.1	0.3	0.8	0	1	1.7	0.1	0.1	0.1	1.1
	20	Commercial & Industrial Film	0	0	0	0	0	0	0	0.3	0.1	0	7
	21	Other Film	1.6	8	1.3	2.2	0.5	1.5	3	0.9	1.3	0.7	1.8
	22	Remainder/ Composite Plastic	0.8	0.9	0.5	4	0.2	0.2	0.8	4.9	0	0.1	1
GLASS	**23**	Glass Bottles and Jars - **clear**	0.5	4.6	1.9	0	0.7	1.1	10.3	1	0	1.3	7.3
	24	Glass Bottles and Jars - **brown**	0.4	2	1.4	0.5	0.6	0.9	16.2	0.6	0	1.1	1.1
	25	Glass Bottles and Jars - **green**	0.9	1.6	0	0	0.4	1.7	5.5	0	0	0.6	4.1
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0	0.2	0	0	0	0
	27	Flat Glass	0	0	0	10.4	0	0	0	0	0	0	0
	28	Other Glass	0	0	0	0	0	0	0	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1	0	0.1	0	0.1	0	0	0	0.1	0.1	0.1
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	0.3	0	0	0	0	0	0
	31	Food Scraps	0.9	2.5	1.2	0.8	0.1	0.6	0.6	0	0	1.4	16.2
	32	Bottom Fines and Dirt	1.2	0	0	2.4	0	0	2.8	0	0.1	0	1.2
	33	Diapers	0	0.2	0	0.5	0	0	0	0	0	0	0
	34	Other Organic	0.2	3.2	0.1	1.6	0.1	0.2	1	0	0	0	0.1
METALS	**35**	Aluminum Beverage Containers	1.2	9.7	1.9	3.8	2.7	2	6.2	0.4	0	2.9	1.3
	36	Other Aluminum	0.1	0.2	0.1	0.2	0.1	0	0.1	0	0.1	0	0.1
	37	Ferrous containers (bi-metal cans)	4.9	8.2	4.1	5.5	3.5	0.9	1.8	0.4	0.1	0.2	1.4
	38	Aerosol cans	0.5	0	0.5	0.4	0	0	0.5	0	0	0	0.6
	39	Other Ferrous	0.1	0	0.1	2.2	0.2	0.1	0.4	0.1	0	0	0.2
	40	Other Non-Ferrous	0	0	0	0	0	1.7	0.7	0	0	0.1	0.3
	41	Other Metal	0	0	0	0	0	0	6.2	0.6	0	0.1	0
TEXTILES	**42**	Carpet and carpet padding	0	0	0	0	0	0	0	0	0	0	0
	43	Clothing and other textiles	0.4	0.8	0	0.4	1	0	3.6	0.2	0	0	4.8
C&D	**44**	Construction and Demolition materials	0	0.9	16.6	1.2	0	0.7	0	0.2	0	13.8	0
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	0	0	0	0	0
	48	Electronic Equipment	0	0	0.4	0.6	0	0	0	0	0	0.2	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0	0	0	0.2	0	0	0.9	0	0	0	9.1
HHW	**50**	Household Hazardous Waste materials	0	0.4	0.1	0	0	0	0.1	1.6	0	0.4	0.3
SAMPLE DETAILS		Sample Name	SRES1	SRES2	SRES3	SRES4	SRES5	SRES6	SRES7	SICI1	SICI2	SICI3	SICI4
		Sample Size (pounds)	197.7	306.2	188.7	289.1	167.9	179.8	337.8	297.5	225.2	275.6	243.5
		Truck Number	08c2351	2421AJ	08C2380	08C2124	4855AH	08C2125	08C2280	M2	211476	211520	211520
		Time	10:06	10:52	11:23	11:44	12:02	3:36	13:16	6:57	7:35	8:36	1:55
		Davidson County Subarea	12	10	12	13	12	10	12	9	9	10	7
		USD/GSD/SAT	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
		Davidson County Grid	147	104	146	134	146	105	146	93	93	92	79
		Private/Metro Hauler	Metro	Metro	Metro	Metro	Metro	Metro	Metro	Private	Private	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	MRF	MRF	MRF	MRF	MRF	MRF	MRF	MRF
		Date:	10/13/17	10/13/17	10/13/17	10/13/17	10/13/17	10/13/17	10/13/17	10/13/17
	Material Group	Sample ID:	TRES1	TRES2	TRES3	TRES4	TICI1	TICI2	TICI3	TICI4
PAPER	**1**	Newsprint	8.1	31.4	4.2	10.6	3.1	9.7	0.2	0
	2	High Grade Office Paper	7	4.3	1.5	7.6	2.2	121.5	46.6	1.5
	3	Magazines/Catalogs	28.5	32.8	6.1	31.2	2.8	7	0.4	5.8
	4	Uncoated OCC	117.9	20.4	66	91.9	174.4	25.6	179	210.5
	5	Kraft	6.6	1.8	1.3	7.1	6	7.8	0.2	6.2
	6	Boxboard	36	15.6	35	25.2	4.4	6.6	7.7	5.6
	7	Mixed Paper - Recyclable	6.9	11.5	2.9	16.3	0.9	7	0.3	4.7
	8	Compostable Paper and 'other' paper	15.7	4.8	2.7	5.5	15.8	0.6	2.9	4
	9	Milk and Juice cartons/boxes, coated	2.4	0.6	0.7	1.3	2.2	1.7	0	0.3
PLASTICS	**10**	#1 PET Bottles/Jars	8.4	3.6	8.2	5	0.9	5.8	0.4	3.2
	11	#1 Other PET Containers & Packaging	3.4	0.8	1.5	1.6	0.2	0.5	0	0.1
	12	#2 HDPE Bottles/Jars - Clear	1.6	1.4	5.7	1.7	1.1	0.5	0	1.3
	13	#2 HDPE Bottles/ Jars - Color	2	0.8	9.7	2.1	1.4	0.8	0	1.8
	14	#2 Other HDPE Containers & Packaging	0	0.2	0	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	1	2.4	0.9	0.1	6.4	0.1	0.2	0.3
	16	#3-#7 Other - All	3.7	2.5	1.7	3	11.7	0.8	0.1	0.6
	17	Other Rigid Plastic Products	1.5	6.8	1.6	4.3	1.8	0.1	0.1	0.2
	18	Grocery & Merchandise Bags	1.1	0.5	0.8	0.5	0.3	0.1	0.1	0
	19	Trash Bags	2.1	1.2	0.7	0.9	9.5	0.3	0.4	0.1
	20	Commercial & Industrial Film	0	0	0	0	0	0	0.1	0.1
	21	Other Film	3.8	1.7	2.6	1.8	7.2	0.3	1	0.7
	22	Remainder/ Composite Plastic	1.7	1.6	1.2	0.3	0.3	0.1	0.1	0.1
GLASS	**23**	Glass Bottles and Jars - **clear**	1.5	1.3	2.9	2.6	0.2	1.1	0	1
	24	Glass Bottles and Jars - **brown**	4.3	0	0	1.6	0	1.1	0	0
	25	Glass Bottles and Jars - **green**	0.2	0	0	0.5	0	0	0	0
	26	Glass Bottles and Jars - **blue**	0	0	0	0.2	0	0	0	0
	27	Flat Glass	0	0	0	0	0	0	0	0
	28	Other Glass	0	0.6	0	0	0	0	0.1	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0	0	0.1	0	3	0	0	1.7
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	0	0	0	0
	31	Food Scraps	1.6	2.2	2.2	0.4	51.4	0.2	4.3	0
	32	Bottom Fines and Dirt	1.6	0	0	0.6	0	0	0	0.2
	33	Diapers	0	0	0	0	18.7	0	0	0
	34	Other Organic	0.4	1	0	0.1	0	0	0	0.2
METALS	**35**	Aluminum Beverage Containers	8.8	4.1	2.9	6.2	1	1.6	0.2	0.7
	36	Other Aluminum	0.1	0.1	0.2	0.1	1.5	0	0	0.1
	37	Ferrous containers (bi-metal cans)	3.7	2.6	2.5	6.5	3	0.3	0	1.4
	38	Aerosol cans	0.8	1	0	0	0	0	0	0
	39	Other Ferrous	0.8	2.2	0	0	0	0.1	0	1.2
	40	Other Non-Ferrous	0	2	0	0	0	0	0	0
	41	Other Metal	0.2	0.1	0	0.2	0	0	0	0
TEXTILES	**42**	Carpet and carpet padding	0	0	0	0	0	0	0	0
	43	Clothing and other textiles	0.9	3	0.5	0	0.7	0	0	0
C&D	**44**	Construction and Demolition materials	0	0	12.6	0	0.4	0.6	0	0
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	0	0
	48	Electronic Equipment	0.1	1.2	0.4	0	0	0	0	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0	0.1	0	12.2	0	0	0	0
HHW	**50**	Household Hazardous Waste materials	0.4	0.4	0	0	3	0	0	0
SAMPLE DETAILS		Sample Name	TRES1	TRES2	TRES3	TRES4	TICI1	TICI2	TICI3	TICI4
		Sample Size (pounds)	284.8	168.6	179.3	249.2	335.5	201.9	244.4	253.6
		Truck Number	2421AJ	4907	08C2350	08C2124	212624	08C2364	209930	211476
		Time	10:06	10:47	10:55	11:49	7:17	8:54	9:29	11:18
		Davidson County Subarea	5	14	14	13	6	9	9	2
		USD/GSD/SAT	USD	USD	USD	USD	GSD	USD	USD	GSD
		Davidson County Grid	83	95	084, 095	135	128	93	93	72
		Private/Metro Hauler	Metro	Metro	Metro	Metro	WM	Metro	WM	WM

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	RTS	RTS	RTS	RTS	RTS	RTS
		Date:	10/9/17	10/9/17	10/9/17	10/9/17	10/9/17	10/9/17
	Material Group	Sample ID:	URES1	URES2	UICI1	UICI2	UICI3	UICI4
PAPER	**1**	Newsprint	2.2	1.2	0.9	0	0	0
	2	High Grade Office Paper	1	0	4	0.5	2.4	1
	3	Magazines/Catalogs	7.2	0.7	5.5	2	1.8	0
	4	Uncoated OCC	3.7	18.5	25.4	8.5	18.7	17.3
	5	Kraft	0.1	1.4	0.4	0	0.4	0
	6	Boxboard	5.3	5.4	6.3	7.3	0	0.8
	7	Mixed Paper - Recyclable	1.4	0	0	0.6	5.9	0
	8	Compostable Paper and 'other' paper	5.4	7.6	36.4	33.7	18.2	5.1
	9	Milk and Juice cartons/boxes, coated	0	0.5	0	0	0	0
PLASTICS	**10**	#1 PET Bottles/Jars	0	3.1	5.8	4.9	3.2	6.6
	11	#1 Other PET Containers & Packaging	0	0.3	6.8	0.7	5.7	0
	12	#2 HDPE Bottles/Jars - Clear	0	1.6	0.7	1.4	0.1	33.7
	13	#2 HDPE Bottles/ Jars - Color	0	1.9	0	1.1	0	7.1
	14	#2 Other HDPE Containers & Packaging	0.7	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	0.6	0.6	2.8	2.7	0.9	0.1
	16	#3-#7 Other - All	0	1.1	3.1	3.9	5.6	0.7
	17	Other Rigid Plastic Products	20.5	12.6	9.2	3	12.8	0.2
	18	Grocery & Merchandise Bags	0.6	1	0	3.3	0.7	0.5
	19	Trash Bags	2.4	2.4	5.9	3.9	4.1	3.5
	20	Commercial & Industrial Film	2.2	1.4	16.1	0	4.3	23.1
	21	Other Film	1.8	1.4	3.1	11.5	2.1	12.4
	22	Remainder/ Composite Plastic	26	6.9	0	0.1	0.4	0.6
GLASS	**23**	Glass Bottles and Jars - **clear**	0	5.5	2.8	6.9	6.4	0
	24	Glass Bottles and Jars - **brown**	1.2	0	2.5	1.1	0	0
	25	Glass Bottles and Jars - **green**	0	0	5.3	0	4.8	0
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0
	27	Flat Glass	0	0	0	0	0	0
	28	Other Glass	0	0	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	4.2	37.4	0	0	0	0
	30	Yard Waste - Woody; branch >0.5"	0	2	0	0	0	0
	31	Food Scraps	6.8	13.6	50.9	71	13.4	17.7
	32	Bottom Fines and Dirt	1	1.5	2.2	4.6	1.4	1
	33	Diapers	2.7	0.3	6.1	10.1	1	0
	34	Other Organic	5	0.3	1.6	0.5	1.6	0
METALS	**35**	Aluminum Beverage Containers	0.4	2	2	1.6	1.7	0
	36	Other Aluminum	0.1	0	0.3	0.2	0.6	0
	37	Ferrous containers (bi-metal cans)	0.3	1.9	0.9	1.9	0.6	0.3
	38	Aerosol cans	0	0	0.2	0	0.2	0.3
	39	Other Ferrous	10.4	0	0.6	0	0	0
	40	Other Non-Ferrous	0	0	0	0	0	0
	41	Other Metal	10.5	0	0	0	0	0
TEXTILES	**42**	Carpet and carpet padding	0	0	0	0	9.3	0
	43	Clothing and other textiles	7.4	23.2	7.3	0	4.3	3.7
C&D	**44**	Construction and Demolition materials	163.7	39.8	4.1	43.7	106.7	2.8
MISC INORG.	**45**	Televisions	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0
	48	Electronic Equipment	11.4	0	0	1.6	0.3	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	59.2	4	15.2	30.7	0.3	0.5
HHW	**50**	Household Hazardous Waste materials	0.1	0.1	54.3	0.1	0	0
SAMPLE DETAILS		Sample Name	URES1	URES2	UICI1	UICI2	UICI3	UICI4
		Sample Size (pounds)	365.5	201.2	288.7	263.1	239.9	139
		Truck Number	8C4145AE	4925AH	1238	1243	31092	3060
		Time	8:30	11:35	8:50	10:41	13:54	14:12
		Davidson County Subarea	5	5	11	14	12	9
		USD/GSD/SAT	USD	USD	USD	GSD	USD	USD
		Davidson County Grid	71	72/82	16		147	
		Private/Metro Hauler	Metro	Metro	Private	Private	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	RTS	RTS	RTS	RTS	RTS	RTS	RTS	RTS	RTS	RTS
		Date:	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17	10/10/17
	Material Group	Sample ID:	VRES1	VRES2	VRES3	VRES4	VRES5	VRES6	VRES7	VICI1	VICI2	VICI3
PAPER	**1**	Newsprint	1.3	1.8	2.2	0.1	1.7	2.8	0.8	0.1	0	6.8
	2	High Grade Office Paper	4.9	0	1.2	0.3	0	0	0	2	0	6
	3	Magazines/Catalogs	7.6	0	0.7	6.5	0	6	4.9	0	0	2.1
	4	Uncoated OCC	31	2.3	1.6	3.2	14.3	0.5	3.7	15.7	7.6	11.1
	5	Kraft	1.1	0	0	0	4.4	0	0.5	0.1	0.5	0.9
	6	Boxboard	9.3	5.5	8.2	3.2	3.9	11.3	7.4	4.1	107.3	6
	7	Mixed Paper - Recyclable	5	5	7.3	1.8	2.1	3.9	0.8	10.4	0.5	7.5
	8	Compostable Paper and 'other' paper	66.2	21.7	32.5	21.6	23	25	23.8	26.3	5.5	22.2
	9	Milk and Juice cartons/boxes, coated	0	0	0.2	0	0.4	0	0	1	0.1	0.1
PLASTICS	**10**	#1 PET Bottles/Jars	12.6	7.5	6.6	8	3.3	4.7	6.1	3.3	1	11
	11	#1 Other PET Containers & Packaging	2.7	0.7	6.6	0	0.5	1.7	1.5	0	0	1.1
	12	#2 HDPE Bottles/Jars - Clear	2.1	0.9	0.2	0	0.2	1.5	1.5	2.1	0	0.4
	13	#2 HDPE Bottles/ Jars - Color	1.2	0.9	2.2	0.3	0.9	3.9	0.9	3.7	0.2	0
	14	#2 Other HDPE Containers & Packaging	0.1	0	2.6	0	0	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	5.8	2.7	6.7	6.8	4.5	4.6	4.8	3.6	0	2.7
	16	#3-#7 Other - All	11.4	5.1	3.4	3.9	3.3	6.4	2.8	10	0.3	3.8
	17	Other Rigid Plastic Products	15.7	2.1	3.8	2.1	7	0	3.6	7.2	0	1.6
	18	Grocery & Merchandise Bags	5.8	0	8.2	3.3	1.9	3.7	4.3	1.1	0.1	1.8
	19	Trash Bags	14.1	2.7	4	5	3.3	3.5	4.8	7.6	1	13.8
	20	Commercial & Industrial Film	16	3.5	0.7	1	2	0	1.5	0.3	10.6	0
	21	Other Film	10	5	0.5	5.4	4.5	6.6	5.5	4.8	0.6	2.6
	22	Remainder/ Composite Plastic	1.5	2.5	1	1.3	4.4	1.3	4.3	23.6	2.8	1.3
GLASS	**23**	Glass Bottles and Jars - **clear**	13.4	5	6.1	8.3	3.5	10.8	7.8	2.4	0.5	12.3
	24	Glass Bottles and Jars - **brown**	12	0	5.7	1.3	0	0	5.7	0	0	5
	25	Glass Bottles and Jars - **green**	2	1.9	2.1	2.7	1.2	5	0	0.4	0	0.5
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0	0	0	0	0
	27	Flat Glass	0	0	0	0	0	0	0	0	0	0
	28	Other Glass	0	0	0	0	0	0	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0	0	0	17.8	7.1	0	6	0	0	0
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	0	0	0	0	0	0
	31	Food Scraps	67.9	55.3	47.2	28.5	9.3	46.6	37	22.6	4.3	53.9
	32	Bottom Fines and Dirt	9	3.4	9.9	14.2	0	5.5	2.8	0	0.7	0
	33	Diapers	24.3	5.3	3.6	14.2	5.1	3.8	6.9	0.6	0	2
	34	Other Organic	14.2	1.9	5.2	25.5	0.3	4.5	0.9	0.2	0	3
METALS	**35**	Aluminum Beverage Containers	5.8	1.9	1.9	1.4	1.2	3.6	7.9	2.6	0.9	3
	36	Other Aluminum	6	1.2	1.4	1.3	1.4	1.4	1.2	0.2	0	0.2
	37	Ferrous containers (bi-metal cans)	11.5	2.4	4	1.2	1.5	3.5	5.4	0	0	0
	38	Aerosol cans	0.2	0.6	0.3	0	0.6	0	0	0	0	0.4
	39	Other Ferrous	1.3	0	0	0.4	0	0.8	2.3	5	5.2	0.3
	40	Other Non-Ferrous	0	0	0	0	0	0	0	0	0	0
	41	Other Metal	2.3	0	0	0	0	0	0	0	0	0
TEXTILES	**42**	Carpet and carpet padding	12.4	18	4.8	0	0	0	0	1.6	0	0
	43	Clothing and other textiles	22	17.7	6.5	8.8	12.2	34	15.2	39.2	0	3.9
C&D	**44**	Construction and Demolition materials	32.2	28.1	3.4	6.5	17.4	5	0	0	0	1
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	0	0	0	0
	48	Electronic Equipment	16.1	2.4	28.6	0.2	0.1	0	0	19.6	0	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	1	26	55.8	0	0	0.6	2.8	2.3	7.4	0.6
HHW	**50**	Household Hazardous Waste materials	0.5	0.5	3	0.5	1.3	1.5	0	7.3	0	2.5
SAMPLE DETAILS		Sample Name	VRES1	VRES2	VRES3	VRES4	VRES5	VRES6	VRES7	VICI1	VICI2	VICI3
		Sample Size (pounds)	479.5	241.5	289.9	206.6	147.8	214	185.4	231	157.1	191.4
		Truck Number	F03	E64	497	E65	4855AH	H20	08C2420	1231	3076	3060
		Time	7:05	9:40	10:22	10:55	12:00	13:15	14:06	6:50	8:15	9:35
		Davidson County Subarea	5	5	5	5	8	8	5	13	5	10
		USD/GSD/SAT	GSD	USD	USD	USD	USD	USD	USD	USD	USD	USD
		Davidson County Grid			71	72						14
		Private/Metro Hauler	Metro	Metro	Metro	Metro	Metro	Metro	Metro	Private	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	RTS	RTS	RTS	RTS	RTS	RTS	RTS	RTS	RTS
		Date:	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17	10/11/17
	Material Group	Sample ID:	WRES1	WRES2	WRES3	WRES4	WRES5	WRES6	WICI1	WICI2	WICI3
PAPER	**1**	Newsprint	1.5	1.5	0.5	6.8	1.5	0.5	0.6	1.1	0.7
	2	High Grade Office Paper	1.8	0.4	0.2	5.7	29.7	0.1	11.4	0	0
	3	Magazines/Catalogs	1.7	0	0.6	1.5	9.5	0.9	4.9	3.5	0.4
	4	Uncoated OCC	0.6	13.3	6.5	5.6	3.2	9.1	14.5	2.9	5.1
	5	Kraft	0	0	0.8	2.3	1.2	0.9	1.4	0.1	0
	6	Boxboard	4.9	5.1	3.6	4.5	6.4	7.2	5.7	6.7	8.2
	7	Mixed Paper - Recyclable	12	9.6	6.4	10.4	15.8	8.7	15.5	10.8	1.9
	8	Compostable Paper and 'other' paper	21.3	19.3	24.7	20.7	24.7	18	40	36.2	20.7
	9	Milk and Juice cartons/boxes, coated	0.9	0.6	0	0.5	0.6	0.6	1.1	0	0
PLASTICS	**10**	#1 PET Bottles/Jars	2	5	6.9	3.8	4.5	3.5	6.4	7.5	4.4
	11	#1 Other PET Containers & Packaging	0.9	0.8	0	2.8	0.6	0.9	2.5	0.3	0.2
	12	#2 HDPE Bottles/Jars - Clear	0.3	0.2	1.5	0.5	0.9	0.6	0.5	0.4	1.3
	13	#2 HDPE Bottles/ Jars - Color	1.3	3.4	0	2.9	1.6	1	0.3	0.9	0.3
	14	#2 Other HDPE Containers & Packaging	1.3	0	0	0	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	2.5	2.3	3.3	1.1	4.4	2.5	5.6	4.3	3
	16	#3-#7 Other - All	3.1	1.8	4.2	3.1	2.4	3.2	6.5	5.1	1.3
	17	Other Rigid Plastic Products	1.9	4.9	13.2	1.4	2.1	0.5	4.2	1.2	0.7
	18	Grocery & Merchandise Bags	1.7	2.1	3.2	1.3	2.5	1.9	2	3.7	3.1
	19	Trash Bags	3.9	5.3	4.4	2.9	2.5	2.9	11.1	5.8	3.2
	20	Commercial & Industrial Film	0.4	1.3	1.4	0.5	1.4	0.7	9.1	1.5	0.5
	21	Other Film	6.4	3.1	3.3	5.4	6.8	5.4	5.3	4.5	2.8
	22	Remainder/ Composite Plastic	4.1	2.6	3.9	5.6	3.1	0.7	1.5	0.9	1.6
GLASS	**23**	Glass Bottles and Jars - **clear**	5.7	5.2	7.5	4.4	6.2	10.4	1.1	1.5	12.8
	24	Glass Bottles and Jars - **brown**	0.4	1.8	19.5	7.4	2.5	4.6	0	0	2.4
	25	Glass Bottles and Jars - **green**	0	0	0	0	1.8	5.6	0	7.8	0
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0	0	0	0
	27	Flat Glass	0	0	0	0	0	0	0	0	0
	28	Other Glass	0	0	0	0	0	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	17.5	0.3	0	33.2	15.6	2.9	2.4	0	0
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	0	0	0	0	0
	31	Food Scraps	37.4	33.5	46.2	59.9	40.1	49	57.5	31.3	31.2
	32	Bottom Fines and Dirt	5.4	6.9	1	3.2	2.8	2.2	4	4.8	3
	33	Diapers	14.8	2.4	4.2	0	5.8	9.5	5.2	2.7	23
	34	Other Organic	9.6	7.6	2.3	18.3	3.2	9.2	1.3	0.9	0.1
METALS	**35**	Aluminum Beverage Containers	0.5	1.1	1.1	0.7	1.2	2.3	1.5	2.6	1.4
	36	Other Aluminum	1	1	1.2	1.4	0.8	1.3	1.2	1.7	1
	37	Ferrous containers (bi-metal cans)	0.6	2.6	1.4	1	2.5	1.6	0	0.6	0.6
	38	Aerosol cans	0.2	0.7	0.3	0	1.4	1.1	0.4	1.7	0.4
	39	Other Ferrous	0	0	0	0.2	1.8	1.7	0.1	1.2	0
	40	Other Non-Ferrous	0	0	0	0	0	0	0	0	0
	41	Other Metal	0	1.1	0	0	0	0	0	0	0
TEXTILES	**42**	Carpet and carpet padding	2.6	0	0	0	0	2.5	0	0	0
	43	Clothing and other textiles	7	23	11.3	5.7	7.7	0	0.8	49.2	16.8
C&D	**44**	Construction and Demolition materials	0	0	43.6	43.1	15.8	0	0	11.4	5.4
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0.2	8.1	0	0	0	0	0.1
	48	Electronic Equipment	0	1.6	0	0	0.9	0	0	0	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	16.7	23.7	0	17.6	8.1	19.5	37.4	21.9	1.4
HHW	**50**	Household Hazardous Waste materials	0.1	0.1	2.5	0	0.4	0	0	1.3	0
SAMPLE DETAILS		Sample Name	WRES1	WRES2	WRES3	WRES4	WRES5	WRES6	WICI1	WICI2	WICI3
		Sample Size (pounds)	194	195.2	230.9	293.5	244	193.2	263	238	159
		Truck Number	4618AH	H79	4749AG	F03	H62	H77	1232	4858AH	4949AH
		Time	9:00	9:20	9:40	10:00	11:45	12:25	6:50	7:18	8:55
		Davidson County Subarea	11	11	8	10	5	6	12	10	13
		USD/GSD/SAT	USD	USD	USD	USD	USD	USD	USD	USD	USD
		Davidson County Grid		106		131		129	160		
		Private/Metro Hauler	Metro	Metro	Metro	Metro	Metro	Metro	Private	Metro	Metro

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	RTS	RTS	RTS	RTS	RTS	RTS	RTS	RTS	RTS	RTS	RTS
		Date:	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17
	Material Group	Sample ID:	XRES1	XRES2	XRES3	XRES4	XRES5	XRES6	XRES7	XRES8	XRES9	XICI1	XICI2
PAPER	**1**	Newsprint	6.8	0.8	0	0	1.6	0.1	0.6	0	0	0	0
	2	High Grade Office Paper	0.9	2	0	24	4.2	0.2	0	5.1	0.4	0	3.2
	3	Magazines/Catalogs	1.2	1.8	0	1	10.6	5.8	0.4	0.2	0.5	0	3.1
	4	Uncoated OCC	2.9	11.7	9.8	5.7	5.4	11.6	2.4	1.1	4.1	58	8.7
	5	Kraft	2.8	0	0	0.2	0.2	0	0	0	0	0	0.9
	6	Boxboard	4.8	5.5	0.8	4.8	4.4	5.2	4.5	5.1	3.5	0	9.1
	7	Mixed Paper - Recyclable	16.4	7.9	6.6	7.9	12.5	18	5.7	10.8	8.2	0	14.9
	8	Compostable Paper and 'other' paper	20.7	22.8	0.7	32.4	29.5	15.9	19.4	29.5	16.5	0	29.2
	9	Milk and Juice cartons/boxes, coated	2.3	0	0	0	0.8	0.4	0.3	0.5	0.2	0	0.7
PLASTICS	**10**	#1 PET Bottles/Jars	1.2	2.6	0.1	3.6	6.2	7	4.5	7.2	5	0.1	4.4
	11	#1 Other PET Containers & Packaging	1.4	1	0.5	3.3	1.1	0.7	0.6	1.2	0.9	0	1.2
	12	#2 HDPE Bottles/Jars - Clear	0.7	0.5	0	0.4	1	0.9	2.4	1.4	0.9	0	2.8
	13	#2 HDPE Bottles/ Jars - Color	0.6	1.5	0	1.2	1.8	1.1	2.8	0.3	1	0	1.4
	14	#2 Other HDPE Containers & Packaging	0	0	0	0	0	0	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	1.4	1.4	1.6	5.2	2.6	6.1	3.1	2.3	3.8	0.1	4.1
	16	#3-#7 Other - All	2.9	2	0.3	4.3	5.2	4.7	2.9	3.1	2.2	0	5
	17	Other Rigid Plastic Products	1.4	0.5	10.6	0.8	1.7	5.8	0.6	4.6	2.3	0	0.9
	18	Grocery & Merchandise Bags	1.1	2.1	0.3	2.2	3.4	1.8	3.7	3.4	2.3	2.3	1.8
	19	Trash Bags	2.5	1.9	0.5	5.4	6.7	4.9	3.4	4.6	3.3	0	2.9
	20	Commercial & Industrial Film	3.9	1.2	3.8	0.5	0	1	5.9	1.4	1.1	0.4	4.2
	21	Other Film	4.8	3.8	0.4	5	3.2	3.7	4.8	6.6	4.8	0	8.3
	22	Remainder/ Composite Plastic	3	1.5	6.3	1.4	1.3	2.9	1.6	1.9	1.3	0	1.3
GLASS	**23**	Glass Bottles and Jars - **clear**	5	6.5	0	1.4	9.1	7.3	4	17.2	11	0	12.5
	24	Glass Bottles and Jars - **brown**	6.3	0	0	1.2	3.1	0	0.4	7.5	1.7	0	4.3
	25	Glass Bottles and Jars - **green**	8.8	0	0	0	0	0	0	0	2.2	0	2.2
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0	0	0	0	0	0
	27	Flat Glass	0	0	0	0	0	0	0	0	0	0	0
	28	Other Glass	0	0	0	0	0	0	0	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	19	16.8	1.3	0	0.1	0	0	0	0.2	0	1.4
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	0	0	0	0	0	0	0
	31	Food Scraps	40.9	44.8	1.6	52.4	50.3	37.2	51.2	56.3	66	0	40.2
	32	Bottom Fines and Dirt	0.4	1	0.5	2.8	2.4	2	2.4	1.1	3	0	2.7
	33	Diapers	7.4	13.7	0	9.5	14.1	6.9	27.8	16	31	0	6.2
	34	Other Organic	2.2	3.5	6.1	0.2	0.3	4.3	3.7	0.4	1.2	0	0.2
METALS	**35**	Aluminum Beverage Containers	0.8	0.5	0	1.4	1.9	4.2	2.2	3.9	1.9	0	1.1
	36	Other Aluminum	3.4	0.5	0	0.7	1	0.8	1.1	0.4	0.7	0	9.8
	37	Ferrous containers (bi-metal cans)	4.3	2.5	0.9	2.8	3.6	5.5	1.6	4.2	1.9	0	18.7
	38	Aerosol cans	2.4	0.5	0.3	0.3	0.3	0	0.4	0.6	2.4	0	0.6
	39	Other Ferrous	2.4	0	0.4	0	1.8	0	0	1.1	0	24.2	0
	40	Other Non-Ferrous	0	0	0	0	0	0	0	0	0	0	0
	41	Other Metal	0	0	0	0	0	0	0	0	0	0	0
TEXTILES	**42**	Carpet and carpet padding	0	34.1	31.5	8	0	0	0	4.7	0	0	13.4
	43	Clothing and other textiles	6.8	6.6	7.8	14.4	1	18.2	1.3	13.6	16.8	0	14.9
C&D	**44**	Construction and Demolition materials	50	18.5	97.1	0	0.7	31.5	3.9	7.2	0	105.4	0
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	1.9	0	0	0	0
	48	Electronic Equipment	12.3	9.3	2.9	0.9	0	3	0	0	0	0	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.9	3.1	42.7	2.8	22.4	43.3	0.3	6.4	8.2	47.9	5.7
HHW	**50**	Household Hazardous Waste materials	0	0.5	0.4	1.2	0.3	0.2	0.3	0.1	2.4	0	0.5
SAMPLE DETAILS		Sample Name	XRES1	XRES2	XRES3	XRES4	XRES5	XRES6	XRES7	XRES8	XRES9	XICI1	XICI2
		Sample Size (pounds)	263	234.9	235.8	209.3	215.8	262.2	172.1	231	212.9	238.4	242.5
		Truck Number	I08	H64	084145AB	E65	08C5630	I08	08C2379	4616AF	H77	3082	08C1769
		Time	6:30	7:05	8:50	9:02	11:10	12:35	11:20	13:00	14:00	8:25	8:45
		Davidson County Subarea	6	13	5	11	11	11	13	11	12	14	10
		USD/GSD/SAT	GSD	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
		Davidson County Grid				119					147	62	
		Private/Metro Hauler	Metro	Metro	Metro	Metro	Metro	Metro	Metro	Metro	Metro	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	RTS	RTS	RTS	RTS	RTS	RTS	RTS	RTS
		Date:	10/13/17	10/13/17	10/13/17	10/13/17	10/13/17	10/13/17	10/13/17	10/13/17
	Material Group	Sample ID:	YRES1	YRES2	YRES3	YICI1	YICI2	YICI3	YICI4	YICI7
PAPER	**1**	Newsprint	0	0.5	3.2	0	0	0	1.6	0
	2	High Grade Office Paper	0.3	0	2.4	0.2	1.2	0	7.3	4.1
	3	Magazines/Catalogs	0.8	6.1	4.6	0	0.3	0	2.1	1.7
	4	Uncoated OCC	9	11.4	7	15	8.2	21.9	6.7	12.9
	5	Kraft	0.2	3.7	0.3	38.7	6.3	0.8	0.4	0
	6	Boxboard	2	8.8	4.9	68.1	5.5	1.9	3.9	6
	7	Mixed Paper - Recyclable	2.6	11.5	14.5	0.7	9.9	5.6	24.1	8.4
	8	Compostable Paper and 'other' paper	5.6	35.8	23.2	20.7	31.1	25.6	34.8	25.2
	9	Milk and Juice cartons/boxes, coated	0.5	0	0	0	0.5	0.7	0.7	0.1
PLASTICS	**10**	#1 PET Bottles/Jars	1.7	4.8	6.2	0	0.5	3.1	4.1	3.8
	11	#1 Other PET Containers & Packaging	0	1	1.1	0	0.9	0.6	1.4	6.3
	12	#2 HDPE Bottles/Jars - Clear	0.3	1.5	0.8	1.4	1	2.5	0.3	0
	13	#2 HDPE Bottles/ Jars - Color	4.7	0.8	5.3	49.7	0.9	1.3	0.5	0.2
	14	#2 Other HDPE Containers & Packaging	0.2	0	0	0	0	3.9	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	0.7	3	3.5	0	3.8	0.8	4.9	1.1
	16	#3-#7 Other - All	1.3	4.2	3	0	5.9	4.4	10.1	8.8
	17	Other Rigid Plastic Products	4	1.6	1	15.2	7.8	1.3	4.3	3.6
	18	Grocery & Merchandise Bags	2.1	2.2	2.8	0	2.5	0.8	6.4	0.5
	19	Trash Bags	1.6	5.1	7	5.5	12	5.9	6.4	9.4
	20	Commercial & Industrial Film	1.6	2.3	3.8	39.2	26.9	3.5	1.5	3.4
	21	Other Film	1.4	6.2	4.7	16.1	8.9	2.9	4.2	4.4
	22	Remainder/ Composite Plastic	12.3	0	2	13.3	18.4	1.6	1.8	0.5
GLASS	**23**	Glass Bottles and Jars - **clear**	2.4	6.7	4.8	0	3	0	2.7	6.9
	24	Glass Bottles and Jars - **brown**	0.8	2.5	8.6	0	0.6	0	0	3
	25	Glass Bottles and Jars - **green**	0	3.6	0	0	0	0	5.2	13.5
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0	0	0
	27	Flat Glass	0	0	0	0	0	0	0	0
	28	Other Glass	0	0	0	0	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0	70.5	5.8	0	0	0	0.4	0
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	0	0	0	0
	31	Food Scraps	8.5	36.2	51.7	10	23.1	57.9	44.7	33.5
	32	Bottom Fines and Dirt	1.2	3.5	3.5	0	1.2	0.9	4.1	2.2
	33	Diapers	0.1	9.8	3.7	0	12.1	22.2	0	0
	34	Other Organic	13.1	2.9	3.6	0	0.5	14.2	0.7	0.5
METALS	**35**	Aluminum Beverage Containers	0.3	2.1	1.4	1.1	1.4	0.8	6.1	4.5
	36	Other Aluminum	0.4	0.7	0.7	0	1.9	0.1	2.6	0.4
	37	Ferrous containers (bi-metal cans)	3	2.6	0.7	0	0.3	1.5	0.6	0
	38	Aerosol cans	0	1.7	0.3	0	0	0	0	0
	39	Other Ferrous	31.5	0	0	0	0	0	0	3.7
	40	Other Non-Ferrous	0	0	0	0.8	0	0	0	0
	41	Other Metal	0	0	0	0	0	0	0	0
TEXTILES	**42**	Carpet and carpet padding	0	0	0	0	0	0.5	0	0
	43	Clothing and other textiles	12.3	17.1	7.9	2.9	20.4	3.1	0	0.7
C&D	**44**	Construction and Demolition materials	89.9	0	0	3.2	0	50.5	0	0
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	1.1	0
	48	Electronic Equipment	0.3	0	0	0	0.9	0	2.4	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	7	4.2	0.3	0	0	12.4	9.8	0
HHW	**50**	Household Hazardous Waste materials	9.8	0.9	0.1	0	11.8	0	1.2	0
SAMPLE DETAILS		Sample Name	YRES1	YRES2	YRES3	YICI1	YICI2	YICI3	YICI4	YICI7
		Sample Size (pounds)	233.5	275.5	194.4	301.8	229.7	253.2	209.1	169.3
		Truck Number	-	H20	2	3082	3060	1308	3043	3021
		Time	7:30	10:30	11:00	6:40	8:07	9:15	10:50	14:05
		Davidson County Subarea	2	5	4	11	10	13	9	9
		USD/GSD/SAT	USD	USD	USD	USD	USD	USD	USD	USD
		Davidson County Grid								
		Private/Metro Hauler	Metro	Metro	Private	Private	Private	Private	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS
		Date:	10/16/17	10/16/17	10/16/17	10/16/17	10/16/17	10/16/17	10/16/17	10/16/17	10/16/17	10/16/17
	Material Group	Sample ID:	ZRES1	ZRES2	ZRES3	ZRES4	ZRES5	ZRES6	ZICI1	ZICI2	ZICI3	ZICI4
PAPER	**1**	Newsprint	0.1	15.2	3.9	1.4	4.4	0.9	0.1	0.1	0	0
	2	High Grade Office Paper	0.8	1.6	1	0.2	2.5	5.8	7.8	10.9	0.7	5.2
	3	Magazines/Catalogs	9.4	4.5	10.1	3.2	19.9	3.7	0	0.7	0.7	0
	4	Uncoated OCC	17.6	4	8.5	11.9	10.3	18.8	33.5	6.9	19.2	57.9
	5	Kraft	2.8	1	1.1	0.9	0.6	2.2	0.9	0.9	0	0
	6	Boxboard	8.4	10.1	11.6	5.4	8.6	11.4	1.2	3.8	1.8	0.8
	7	Mixed Paper - Recyclable	14.4	9.7	16	4	9.1	11	0.9	6.1	0	0.3
	8	Compostable Paper and 'other' paper	12.8	30.9	24	27.9	16.5	23.2	11.9	39	4.9	0
	9	Milk and Juice cartons/boxes, coated	0.1	0.4	0.2	0.9	0.2	0.5	0	0	0	0
PLASTICS	**10**	#1 PET Bottles/Jars	6.8	7.1	6.2	2.7	3.6	7.7	2.3	3.4	1	0.6
	11	#1 Other PET Containers & Packaging	1.9	1.4	1.1	1	0.7	0.7	0.1	0.7	0.2	0
	12	#2 HDPE Bottles/Jars - Clear	0.6	1.8	1.2	1.1	0.9	2.3	0	0.6	0.4	0
	13	#2 HDPE Bottles/ Jars - Color	3.9	2.7	5.1	2	2.4	1.5	0	2	0.9	0
	14	#2 Other HDPE Containers & Packaging	0	0	0	0	0	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	1.7	2.3	3.5	3.5	0.6	4.6	1.9	5.6	1.2	1
	16	#3-#7 Other - All	3.8	5.3	3.9	2.3	3.4	6.4	1.2	3.6	0.5	0.2
	17	Other Rigid Plastic Products	1.4	1	2.5	0.8	4.7	1.3	7	3	0.7	11
	18	Grocery & Merchandise Bags	2.8	3.8	4.1	4.1	2.2	3.7	0.2	3.6	0.6	0.1
	19	Trash Bags	3.7	3.8	4.1	4	2.8	4	2	13.6	0.5	0.6
	20	Commercial & Industrial Film	0	0	0	0	0	0	44.1	0.1	0.2	8.7
	21	Other Film	8.3	5.2	7.4	8.7	3.8	6.5	6.9	8.4	2.4	0.6
	22	Remainder/ Composite Plastic	11.7	0.9	3.3	1.9	4.4	2.8	1.3	3.5	0.9	0.1
GLASS	**23**	Glass Bottles and Jars - **clear**	9.2	7.5	6.2	4.4	6.3	5.7	0	6.9	0.3	0
	24	Glass Bottles and Jars - **brown**	13.3	0	0	5.9	2.3	0	0	0	0	0
	25	Glass Bottles and Jars - **green**	5.9	2.8	0.6	0.9	2.9	3	0	0	0.5	0
	26	Glass Bottles and Jars - **blue**	0	0	0	1	0	0	0	0	0	0
	27	Flat Glass	0.3	0	0.3	0	0	0	0.1	0	0.1	0
	28	Other Glass	0	0	1.7	0	0.1	0	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	1.1	2.3	0.2	11	6.7	0.9	6.7	0.1	8.4	0
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	0	0.1	0	0	0	0
	31	Food Scraps	43.8	69.8	66.5	41.4	30.1	40.3	7.8	73.7	1.9	2.6
	32	Bottom Fines and Dirt	0.8	0.6	0.2	0	0.7	1.4	4.8	0.2	8.2	0
	33	Diapers	9.3	15.8	20.3	5.4	6.8	7.4	0	0.6	0	1.9
	34	Other Organic	4.5	19.4	9.2	0.1	10.5	9.3	0.1	0.1	0.4	0
METALS	**35**	Aluminum Beverage Containers	0.8	2.4	2	0.7	1.8	1.4	0.6	2.8	0.3	0.3
	36	Other Aluminum	0.4	0.3	0.6	0.8	0.1	0.3	0.1	0.2	0.1	0
	37	Ferrous containers (bi-metal cans)	2.3	2.7	4.4	4.2	3.6	3.6	0	2.4	0.7	0
	38	Aerosol cans	0	1.9	1.4	0	0.3	1.2	0.1	0.9	0	0
	39	Other Ferrous	2.4	0.2	2.2	0.1	0.1	1.3	0.6	0	11.9	0.5
	40	Other Non-Ferrous	0	0	0.2	0	0	0	0	0	0	0
	41	Other Metal	0.9	0	0.4	0.2	0	0.9	0.4	0.2	0	0
TEXTILES	**42**	Carpet and carpet padding	0	0	0.1	0	0	0	0	0	0	0
	43	Clothing and other textiles	11.3	1.4	19.5	7.5	1.7	24.5	1	6.7	0.7	4.9
C&D	**44**	Construction and Demolition materials	9	0.7	0	0	5.4	0.5	144.9	0	26.5	108
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	0	0	0	12.2
	48	Electronic Equipment	3.3	0.2	0.2	1.2	0.7	0	0	0	0	1
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0	0.3	0.8	0	1.5	0.5	0	27.3	183.3	1.4
HHW	**50**	Household Hazardous Waste materials	24.3	1.7	4	0.5	6.7	0.2	0	0.7	0	0
SAMPLE DETAILS		Sample Name	ZRES1	ZRES2	ZRES3	ZRES4	ZRES5	ZRES6	ZICI1	ZICI2	ZICI3	ZICI4
		Sample Size (pounds)	255.9	242.7	259.8	173.2	189.9	221.5	290.5	239.3	280.1	219.9
		Truck Number	495	70148	497	10786	-	21	414532	414019	414019	2381
		Time	7:40	9:36	10:40	12:28	12:35	14:43	8:15	8:59	9:52	15:00
		Davidson County Subarea	10	14	4	6	13	13	4	9	11	10
		USD/GSD/SAT	GSD	GSD	USD	GSD	USD	USD	USD	USD	USD	USD
		Davidson County Grid										
		Private/Metro Hauler	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS
		Date:	10/17/17	10/17/17	10/17/17	10/17/17	10/17/17	10/17/17	10/17/17	10/17/17
		Material Group Sample ID:	AARES1	AARES2	AARES3	AAICI1	AAICI2	AAICI3	AAICI4	AAICI5
PAPER	**1**	Newsprint	15.1	2.9	6.5	0.3	0	0.2	0.1	0.2
	2	High Grade Office Paper	0.9	3.6	1.1	0.1	19.4	2.1	1.3	3.1
	3	Magazines/Catalogs	13.1	6.2	17.1	0	0	0	1.1	0.4
	4	Uncoated OCC	12.6	11.5	8	3	37.9	10.2	13.7	45.8
	5	Kraft	1.5	4.7	2.8	0	0.5	0	0.9	0.2
	6	Boxboard	11.3	8.3	12.1	1	1.4	7.7	0	2.4
	7	Mixed Paper - Recyclable	8	2.6	6.9	1.5	2	4.2	1.5	3.9
	8	Compostable Paper and 'other' paper	29.4	17.6	23	2.9	25.9	52.7	30.1	7.2
	9	Milk and Juice cartons/boxes, coated	0.4	0.2	0.1	0	0.1	0.9	0.1	0
PLASTICS	**10**	#1 PET Bottles/Jars	5.8	6.9	5.6	0.7	2.8	6.5	3.4	2.4
	11	#1 Other PET Containers & Packaging	1.4	0.8	0.8	0.5	0.5	0.4	0.2	0.2
	12	#2 HDPE Bottles/Jars - Clear	0.3	1.8	1.1	0	0.3	0.6	0.1	0.1
	13	#2 HDPE Bottles/ Jars - Color	1.3	1.3	3	0	0.8	1.1	0.8	1.4
	14	#2 Other HDPE Containers & Packaging	0	0	0	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	1.8	3.7	2	0.3	0.1	2.1	2.6	2.1
	16	#3-#7 Other - All	5.5	1.9	4.3	0.8	1	2.8	4.5	1.8
	17	Other Rigid Plastic Products	5.5	3.1	1.2	54.9	0.5	1.1	3.7	0.5
	18	Grocery & Merchandise Bags	2.1	3.2	1.5	0.1	0.6	2	1.3	1.2
	19	Trash Bags	7.7	3.5	16.6	0.8	5.2	9.6	1.5	1.2
	20	Commercial & Industrial Film	0	0.2	0	0.1	0	0.4	0	0
	21	Other Film	8.4	5.8	5.4	0.6	7.1	5.6	18.1	5.4
	22	Remainder/ Composite Plastic	1.9	3.6	3.3	9.1	3.1	4.4	3	0.8
GLASS	**23**	Glass Bottles and Jars - **clear**	14.5	3.7	6.9	0	0	1.5	0.6	0.2
	24	Glass Bottles and Jars - **brown**	3.2	4.2	1.4	0	0	0.2	0	0
	25	Glass Bottles and Jars - **green**	1.7	2.4	6.4	0	0	0	0.2	0
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0	0	0
	27	Flat Glass	0	0	0	4.7	0	0	0	0
	28	Other Glass	0	0	0	0	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	2.2	0	0.2	0.1	0	0	0.1	0
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	0	0	0	0
	31	Food Scraps	64.9	46.6	47.1	2.5	9.2	16.6	10	20.6
	32	Bottom Fines and Dirt	0.6	2.6	0.7	1.2	1.2	0	1.4	1.2
	33	Diapers	1.3	8.7	11.8	0.6	0	7.1	0.2	0.2
	34	Other Organic	29.5	16.4	6.9	0.2	0.1	0.3	5	0.1
METALS	**35**	Aluminum Beverage Containers	1.5	3.7	1.3	0.1	1.1	1.4	1.7	1.2
	36	Other Aluminum	1.2	0.3	0.3	0	0.1	0.1	0.1	0.1
	37	Ferrous containers (bi-metal cans)	4	6.6	2	0	0.2	0.6	1.6	0.4
	38	Aerosol cans	0.2	0	0.4	0	0	0.6	2.1	0.2
	39	Other Ferrous	0	0.1	0	4.9	0	16.1	20.6	4.2
	40	Other Non-Ferrous	0	0	0	1	0	0	0	0.9
	41	Other Metal	1.6	0.7	1.8	3.2	1.8	7.8	0	0
TEXTILES	**42**	Carpet and carpet padding	0	37.9	0	0.1	0	0	43.5	0
	43	Clothing and other textiles	4.6	5.2	0.8	24.5	11.6	24.4	12.2	1.2
C&D	**44**	Construction and Demolition materials	0.8	0	1.8	65.6	42.8	28.6	40	67.1
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	0.1	0
	48	Electronic Equipment	1.4	1.3	1.4	0.6	0.1	0.2	0.9	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	1.5	6.4	4.9	80.8	8.7	4.2	0.2	24.4
HHW	**50**	Household Hazardous Waste materials	1.4	0.4	9.1	0	34.5	0.4	1	0
SAMPLE DETAILS		Sample Name	AARES1	AARES2	AARES3	AAICI1	AAICI2	AAICI3	AAICI4	AAICI5
		Sample Size (pounds)	270.1	240.6	227.6	266.8	220.6	224.7	229.5	202.3
		Truck Number	10784	521	10586	414538	414466	211515	211514	211521
		Time	6:45	7:38	13:35	7:25	8:05	9:25	9:48	10:10
		Davidson County Subarea	10	1	13	7	13	8	11	13
		USD/GSD/SAT	GSD	GSD	USD	USD	USD	USD	USD	USD
		Davidson County Grid								
		Private/Metro Hauler	Private	Private	Private	Private	Private	Private	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	WMTS	WMTS	WMTS	WMTS	WMTS
		Date:	10/17/17	10/17/17	10/17/17	10/17/17	10/17/17
	Material Group	Sample ID:	AAICI6	AAICI7	AAICI9	AAICI10	AAICI8
PAPER	**1**	Newsprint	2.5	0	0.4	6.8	2.7
	2	High Grade Office Paper	0.1	0.3	2.1	0.2	1.3
	3	Magazines/Catalogs	4.4	0	0	8.5	6.7
	4	Uncoated OCC	19.9	32.3	75.1	5.5	17
	5	Kraft	0.9	1	0.5	0.1	3
	6	Boxboard	8.3	1.6	1.9	4.8	13.7
	7	Mixed Paper - Recyclable	4.7	10	3.4	6.8	5.5
	8	Compostable Paper and 'other' paper	22.3	0.2	14.6	31.5	41.7
	9	Milk and Juice cartons/boxes, coated	0.8	0	0	0.6	0.1
PLASTICS	**10**	#1 PET Bottles/Jars	5.1	0.1	0.5	6.2	7.2
	11	#1 Other PET Containers & Packaging	0.7	0	1.3	0.6	1.6
	12	#2 HDPE Bottles/Jars - Clear	1.9	0	0.6	1.1	1.3
	13	#2 HDPE Bottles/ Jars - Color	2.1	0	0	2.1	2.1
	14	#2 Other HDPE Containers & Packaging	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	3.1	0	0.5	0.8	1.4
	16	#3-#7 Other - All	2	0	2.3	1.7	3.6
	17	Other Rigid Plastic Products	5.3	7.8	1.8	0.5	1.7
	18	Grocery & Merchandise Bags	3.4	0.1	0.6	2.6	3.6
	19	Trash Bags	3.4	0.1	5.9	3.2	4.4
	20	Commercial & Industrial Film	0.1	0	0	0	0
	21	Other Film	6.4	1.3	4	6.2	7.2
	22	Remainder/ Composite Plastic	5.5	19.3	1.5	1.4	3
GLASS	**23**	Glass Bottles and Jars - **clear**	10.1	2.5	4.3	7	11.1
	24	Glass Bottles and Jars - **brown**	7.6	0	4.5	2.8	3.9
	25	Glass Bottles and Jars - **green**	2.4	0	5.2	4.3	5.3
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0
	27	Flat Glass	2.7	0.4	0	0	0.1
	28	Other Glass	0	0	0	0	0.2
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.9	0	0	0.1	0.8
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	0
	31	Food Scraps	38.3	0.1	62.7	30.6	35
	32	Bottom Fines and Dirt	0	0	0	2.4	1.2
	33	Diapers	14.8	0.3	0.1	17.9	3.9
	34	Other Organic	0.5	2.4	0.1	2.6	5.2
METALS	**35**	Aluminum Beverage Containers	2.3	0	0.8	2.1	4.1
	36	Other Aluminum	0.4	0	0	0.3	0.9
	37	Ferrous containers (bi-metal cans)	3	0	0.9	2.5	3
	38	Aerosol cans	0	0	0	0.1	0.3
	39	Other Ferrous	0	14.2	0.7	0	1.5
	40	Other Non-Ferrous	0	1.9	0	0	0
	41	Other Metal	1	3.6	0	9.9	0.1
TEXTILES	**42**	Carpet and carpet padding	0	0	1.8	13.6	0
	43	Clothing and other textiles	12.5	71.9	37.7	11.4	15.3
C&D	**44**	Construction and Demolition materials	36.2	39.4	0	2	0.7
MISC INORG.	**45**	Televisions	0	0	0	0	0
	46	Computer Monitors	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0
	48	Electronic Equipment	0	6	0	0.1	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	4.1	36	0.7	0	0.2
HHW	**50**	Household Hazardous Waste materials	13	0	0	0.6	3
SAMPLE DETAILS		Sample Name	AAICI6	AAICI7	AAICI9	AAICI10	AAICI8
		Sample Size (pounds)	252.7	252.8	236.5	201.5	224.6
		Truck Number	3424	414538	415586	10717	414533
		Time	11:47	13:00	14:05	14:30	14:48
		Davidson County Subarea	13	7	11	5	14
		USD/GSD/SAT	USD	USD	USD	SAT	USD
		Davidson County Grid					
		Private/Metro Hauler	Private	Private	Private	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS
		Date:	10/18/17	10/18/17	10/18/17	10/18/17	10/18/17	10/18/17	10/18/17	10/18/17
		Material Group Sample ID:	BBRES1	BBRES2	BBRES3	BBICI1	BBICI2	BBICI3	BBICI4	BBICI5
PAPER	**1**	Newsprint	3	12.1	1.7	0	0	0	0	16.8
	2	High Grade Office Paper	1.2	1	0.2	0	0	0.1	0.7	4.2
	3	Magazines/Catalogs	5.5	17.3	1.8	1.2	0	0	3	9
	4	Uncoated OCC	16.1	27.8	3.9	4.8	51.1	4.1	42.5	7.7
	5	Kraft	0.5	4.8	1.8	0	0	0	2.8	7.5
	6	Boxboard	13.1	8.3	5.3	0	0	0.5	6.9	61.4
	7	Mixed Paper - Recyclable	6.7	5.8	4.4	0	0	0.1	2.2	0
	8	Compostable Paper and 'other' paper	22.6	13.5	24.7	0	0	0.4	27.3	47.2
	9	Milk and Juice cartons/boxes, coated	0	0.1	0.1	0	0	0	0	0.1
PLASTICS	**10**	#1 PET Bottles/Jars	5.4	2.5	4	0.1	0	0.1	4.6	2.3
	11	#1 Other PET Containers & Packaging	2	1.8	1.9	0	0	0	0.8	0.2
	12	#2 HDPE Bottles/Jars - Clear	1.2	1.7	1.1	0	0	0	0.3	0
	13	#2 HDPE Bottles/ Jars - Color	1.2	1.8	1.1	0.1	0.6	0	0.4	0.1
	14	#2 Other HDPE Containers & Packaging	0	0	0	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	2.3	2	1.4	0.1	0	0.1	3.4	1.3
	16	#3-#7 Other - All	3.2	3.2	3.5	0.2	0	0.1	3.1	1
	17	Other Rigid Plastic Products	2.2	4.9	1.2	0.4	0	0.3	7.7	3.1
	18	Grocery & Merchandise Bags	3.1	1.2	2.8	0.1	0	0	2.9	0.2
	19	Trash Bags	4.5	3.6	4.4	0.1	0	152.6	4.5	0.5
	20	Commercial & Industrial Film	0	0	0	0.1	0.4	0.1	0	6.5
	21	Other Film	6.2	6.4	7.4	0.1	0	1.1	6.2	11.2
	22	Remainder/ Composite Plastic	2.6	3.8	2.5	0	0	0.6	1.2	6.3
GLASS	**23**	Glass Bottles and Jars - **clear**	16.3	8.1	10.6	0.1	0	0	2.8	0.4
	24	Glass Bottles and Jars - **brown**	9.8	12.9	5.3	0.4	0	0	7	0
	25	Glass Bottles and Jars - **green**	0	4.8	6.6	0	0	0	3.8	0
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0	0	0
	27	Flat Glass	0	0	0	0	0	0	0	0
	28	Other Glass	0	0.1	0	0	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.1	1.2	1.5	92.7	0	0	0.7	0
	30	Yard Waste - Woody; branch >0.5"	0.1	0	0	0	0	0	0	0
	31	Food Scraps	30.4	48.1	66.7	120.4	197.2	1.1	32.5	4.8
	32	Bottom Fines and Dirt	0	0	0.1	0	0	0	0.8	0
	33	Diapers	14.3	1	2.1	0	0	22	6.2	0.1
	34	Other Organic	0.7	1.9	18.2	0	0	0	1.1	0.4
METALS	**35**	Aluminum Beverage Containers	3.4	0.4	3.5	0	0	0	2	1.4
	36	Other Aluminum	0.4	0.5	0.8	0	0	0	0.4	0.1
	37	Ferrous containers (bi-metal cans)	5	3.4	3.4	0	0	0	0	0
	38	Aerosol cans	0.8	0.5	0	0	0	0	0	0.2
	39	Other Ferrous	1	2.2	0.1	0.2	0	0	0	0.6
	40	Other Non-Ferrous	0	0	0	0	0	0	0	0
	41	Other Metal	0.8	0	0	0	0	0	0	0
TEXTILES	**42**	Carpet and carpet padding	0	0	0	0	0	0	0	0
	43	Clothing and other textiles	3	2.1	0.7	0.2	0	18.9	8.3	8.3
C&D	**44**	Construction and Demolition materials	7.5	6.2	7.4	14.6	0	0.2	12.3	2.3
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	43.4	0
	46	Computer Monitors	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	0	0
	48	Electronic Equipment	0	3.4	0.2	0	0	0	0.1	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	6.6	5.7	4	0	0	1.8	0.1	0
HHW	**50**	Household Hazardous Waste materials	0.1	0.9	0.1	0	0	2.1	0.3	0.1
SAMPLE DETAILS		Sample Name	BBRES1	BBRES2	BBRES3	BBICI1	BBICI2	BBICI3	BBICI4	BBICI5
		Sample Size (pounds)	202.9	227	206.5	235.9	249.3	206.3	242.3	205.3
		Truck Number	H50	12	497	215526	-	414215	211690	415710
		Time	7:10	9:30	10:15	7:53	-	9:25	9:55	11:10
		Davidson County Subarea	13	10	7	12	14	4	10	5
		USD/GSD/SAT	USD	USD	USD	USD	USD	USD	USD	USD
		Davidson County Grid								
		Private/Metro Hauler	Private	Private	Private	Private	Private	Private	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	WMTS	WMTS	WMTS	WMTS
		Date:	10/18/17	10/18/17	10/18/17	10/18/17
	Material Group	Sample ID:	BBICI6	BBICI7	BBICI8	BBICI9
PAPER	**1**	Newsprint	0	0.1	0.7	0.8
	2	High Grade Office Paper	1.7	0.1	4.8	0.3
	3	Magazines/Catalogs	3.9	14	4.2	2.7
	4	Uncoated OCC	15.6	18.5	12.9	4.1
	5	Kraft	2.2	0.3	0.9	0.7
	6	Boxboard	6.7	4.4	3.1	6.7
	7	Mixed Paper - Recyclable	2.7	0	8.3	5
	8	Compostable Paper and 'other' paper	31.6	16.5	31.1	17.1
	9	Milk and Juice cartons/boxes, coated	0.1	0.1	0.4	0.6
PLASTICS	**10**	#1 PET Bottles/Jars	5.5	3.6	2	3.5
	11	#1 Other PET Containers & Packaging	1.7	1.1	0.4	1.3
	12	#2 HDPE Bottles/Jars - Clear	0.9	0.2	0	0.1
	13	#2 HDPE Bottles/ Jars - Color	1.4	0.6	0.1	0.8
	14	#2 Other HDPE Containers & Packaging	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	3	6.7	2.7	1.2
	16	#3-#7 Other - All	4.3	1.4	5.1	2.2
	17	Other Rigid Plastic Products	4.5	2	1	0.9
	18	Grocery & Merchandise Bags	2.6	1.3	1.5	1.8
	19	Trash Bags	5.7	4	9.5	2.2
	20	Commercial & Industrial Film	0.1	1	0	0
	21	Other Film	5.6	7.5	4.3	6.5
	22	Remainder/ Composite Plastic	1.2	5	2	1.4
GLASS	**23**	Glass Bottles and Jars - **clear**	6.6	4.6	8.6	1.6
	24	Glass Bottles and Jars - **brown**	3.1	3.8	0.4	0
	25	Glass Bottles and Jars - **green**	1.5	0.1	26.1	2.5
	26	Glass Bottles and Jars - **blue**	0	0	0	0
	27	Flat Glass	0	0	0	0
	28	Other Glass	0	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	1.9	0.1	0.7	59.7
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0
	31	Food Scraps	34.7	16.2	41.8	36.2
	32	Bottom Fines and Dirt	0.4	0	0.4	0.2
	33	Diapers	3.4	0.1	0.9	25.5
	34	Other Organic	10.1	1.7	8.4	0.8
METALS	**35**	Aluminum Beverage Containers	1.6	0.6	2	0.4
	36	Other Aluminum	0.6	0.2	2.1	1
	37	Ferrous containers (bi-metal cans)	2	4.6	0.9	0.8
	38	Aerosol cans	0	0.1	1	0.3
	39	Other Ferrous	0.1	4.8	0	0
	40	Other Non-Ferrous	0	0	0	0
	41	Other Metal	0.2	0	0	0.1
TEXTILES	**42**	Carpet and carpet padding	0	0	0	0
	43	Clothing and other textiles	14.4	8.9	0.7	1.9
C&D	**44**	Construction and Demolition materials	1.3	4.5	0	0.2
MISC INORG.	**45**	Televisions	0	0	0	0
	46	Computer Monitors	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0
	48	Electronic Equipment	0	1.8	0	6.2
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	3.5	33	0	0
HHW	**50**	Household Hazardous Waste materials	13.8	26.1	0.7	0
SAMPLE DETAILS		Sample Name	BBICI6	BBICI7	BBICI8	BBICI9
		Sample Size (pounds)	200.2	199.6	189.7	197.3
		Truck Number	211690	3472	414548	H05
		Time	12:30	13:16	14:05	14:55
		Davidson County Subarea	10	5	9	10
		USD/GSD/SAT	USD	USD	USD	GSD
		Davidson County Grid				
		Private/Metro Hauler	Private	Private	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS
		Date:	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17
		Material Group Sample ID:	CCRES1	CCRES2	CCRES3	CCRES4	CCRES5	CCICI1	CCICI2	CCICI3
PAPER	**1**	Newsprint	4	0.2	0.4	9.5	5.3	0	5.2	0
	2	High Grade Office Paper	1.6	0.6	0.6	4.6	1.4	1	5.5	0.8
	3	Magazines/Catalogs	14.2	3.8	2.3	13.5	13.5	0.4	5.6	14
	4	Uncoated OCC	4.8	2.7	6.4	1.2	11.4	71.1	9.6	0
	5	Kraft	4	0.6	1.7	2.2	1.4	0.3	0.7	0
	6	Boxboard	7.2	6.5	5.8	12.8	12.6	3.3	3.2	4.7
	7	Mixed Paper - Recyclable	7.4	1.5	2.2	4.4	6.8	5.7	2.3	2.5
	8	Compostable Paper and 'other' paper	22.6	26	15.1	20.3	24.5	22.7	9.5	1.6
	9	Milk and Juice cartons/boxes, coated	0.5	0.2	0.7	0.6	0.1	0	0.1	0
PLASTICS	**10**	#1 PET Bottles/Jars	3.9	5.1	3.6	7.8	8.6	2.3	4.3	0.2
	11	#1 Other PET Containers & Packaging	0.8	1.7	1.6	1.6	1.1	0.4	0.3	0
	12	#2 HDPE Bottles/Jars - Clear	1	0.3	1	1.7	2.5	1.3	0.7	0
	13	#2 HDPE Bottles/ Jars - Color	2.5	1.2	0.1	0.9	3.4	0.5	0.6	0
	14	#2 Other HDPE Containers & Packaging	0	0	0	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	1.6	2.1	0.9	2.7	2.6	1.9	1.1	0.2
	16	#3-#7 Other - All	3.4	5.2	4.1	5.3	3.2	1.6	1.4	0.1
	17	Other Rigid Plastic Products	1.5	1.6	0.6	2.6	2.3	6.7	0.5	8.1
	18	Grocery & Merchandise Bags	1.5	3	0.7	2.4	3.9	1.6	0.9	0.1
	19	Trash Bags	3.7	3.4	2.4	3.2	4.3	4.8	2.4	0
	20	Commercial & Industrial Film	0	0	0	0	0	0	0.4	0
	21	Other Film	7.3	6.2	4.7	5.1	6.5	13.9	2.5	2.1
	22	Remainder/ Composite Plastic	5.8	0	3.1	2	1.9	0.9	2.2	51.1
GLASS	**23**	Glass Bottles and Jars - **clear**	2.6	3.4	12.2	3.2	6.6	4.4	2.2	0
	24	Glass Bottles and Jars - **brown**	0.2	1.2	3	4.7	2	0.1	0.6	0
	25	Glass Bottles and Jars - **green**	6	0.6	4	5.4	0	3.7	0	0
	26	Glass Bottles and Jars - **blue**	0	0	0	0	2.3	0	0	0
	27	Flat Glass	0	0	0	0	0	0	0	0
	28	Other Glass	0	0	0.4	0	0.1	0	0	0.1
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.8	62	3.4	2.8	12.9	0	76.9	0
	30	Yard Waste - Woody; branch >0.5"	0	0	0.2	0.3	0	0	0	0
	31	Food Scraps	55.5	31.5	42.4	59.8	82.3	54.7	13.9	2.2
	32	Bottom Fines and Dirt	0.3	37.8	0.5	0.1	0.1	1.2	8.6	0
	33	Diapers	0.4	3.8	21.9	0.8	5.5	7.4	0.2	0.1
	34	Other Organic	11.3	0.1	6.9	8.2	10.8	0.1	0.1	1.4
METALS	**35**	Aluminum Beverage Containers	0.4	1.4	0.4	0.6	2.6	0.6	1.1	0
	36	Other Aluminum	1.5	0.1	0.1	1.2	0.3	0.1	0.2	0.1
	37	Ferrous containers (bi-metal cans)	6.8	1.1	0.4	2.8	2.8	1.6	0.1	1
	38	Aerosol cans	0.1	0.1	0.1	0.1	0.7	0	0.2	0
	39	Other Ferrous	0.4	0.5	0	0.1	0.2	0.1	2	5.4
	40	Other Non-Ferrous	0	0	0	0	0	0	0.4	0
	41	Other Metal	0	0	0	0.5	0	0	0	1.3
TEXTILES	**42**	Carpet and carpet padding	0	0	0	0	0	0	0	0
	43	Clothing and other textiles	9	8.7	1.1	6.2	24.9	3.5	0.5	36.2
C&D	**44**	Construction and Demolition materials	0.6	0.4	25.7	1.7	4	25.9	44.6	0.9
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	0	21.4
	46	Computer Monitors	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	8.4	0	0	0	0	2.3
	48	Electronic Equipment	0	0	0	0	0	0.1	0	15.1
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	1.4	0.4	0	0.1	0.1	0	3.3	73.2
HHW	**50**	Household Hazardous Waste materials	0.1	0.1	0.1	0.6	0.5	0.3	0	0.9
SAMPLE DETAILS		Sample Name	CCRES1	CCRES2	CCRES3	CCRES4	CCRES5	CCICI1	CCICI2	CCICI3
		Sample Size (pounds)	196.7	225.1	189.2	203.6	276	244.2	213.9	247.1
		Truck Number	4044	70	H52	828	497	211514	211521	414019
		Time	10:35	11:55	12:50	13:10	14:50	7:35	8:00	8:35
		Davidson County Subarea	10	14	10	6	12	13	13	4
		USD/GSD/SAT	GSD	GSD	GSD	GSD	GSD	USD	USD	USD
		Davidson County Grid	144		145					
		Private/Metro Hauler	Private	Private	Private	Private	Private	Private	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	WMTS	WMTS	WMTS	WMTS
		Date:	10/19/17	10/19/17	10/19/17	10/19/17
	Material Group	Sample ID:	CCICI4	CCICI5	CCICI6	CCICI7
PAPER	**1**	Newsprint	0.6	0	0.4	0.5
	2	High Grade Office Paper	0.3	0.6	0.8	0.1
	3	Magazines/Catalogs	3.5	2.8	0.3	0
	4	Uncoated OCC	10.9	7.3	6.1	6.1
	5	Kraft	1.9	0.4	0.4	0.1
	6	Boxboard	10.8	7.8	9.4	1
	7	Mixed Paper - Recyclable	2.4	16.2	0.9	0.2
	8	Compostable Paper and 'other' paper	28.1	32.3	26.6	4.3
	9	Milk and Juice cartons/boxes, coated	0.9	0.1	0.4	0.1
PLASTICS	**10**	#1 PET Bottles/Jars	6.1	3.7	4.3	1.3
	11	#1 Other PET Containers & Packaging	1.5	0.5	0.5	0.1
	12	#2 HDPE Bottles/Jars - Clear	0.8	0.3	1	0.3
	13	#2 HDPE Bottles/ Jars - Color	2.5	0.3	0.3	0.1
	14	#2 Other HDPE Containers & Packaging	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	2.2	0.6	1.7	0.1
	16	#3-#7 Other - All	5.9	2	2	1
	17	Other Rigid Plastic Products	3.2	1.2	2.4	0.3
	18	Grocery & Merchandise Bags	5	2.3	5	0.3
	19	Trash Bags	6.6	2.6	3	1.6
	20	Commercial & Industrial Film	0	0	0	8.6
	21	Other Film	7.4	3.3	6.6	2.8
	22	Remainder/ Composite Plastic	1.6	3.4	1.9	0.3
GLASS	**23**	Glass Bottles and Jars - **clear**	11.8	4.6	19.4	0.1
	24	Glass Bottles and Jars - **brown**	7.4	0	2.9	0.6
	25	Glass Bottles and Jars - **green**	7.5	0	1.6	0
	26	Glass Bottles and Jars - **blue**	0	2.1	0	0
	27	Flat Glass	1.6	0	0	1.5
	28	Other Glass	0.2	0	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.5	0	1	0.1
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0
	31	Food Scraps	80.1	16.7	60.9	6
	32	Bottom Fines and Dirt	0.1	0.3	1.3	54.2
	33	Diapers	0	11.4	9.2	0
	34	Other Organic	2	3.2	1.7	0
METALS	**35**	Aluminum Beverage Containers	1.5	1.6	2.1	0.2
	36	Other Aluminum	0.8	0.4	0.5	0.2
	37	Ferrous containers (bi-metal cans)	1.8	1.6	2.1	0.7
	38	Aerosol cans	0.2	0	0	0
	39	Other Ferrous	0.1	0.1	0.2	0.1
	40	Other Non-Ferrous	0	0	0	0
	41	Other Metal	1	0	0.9	0
TEXTILES	**42**	Carpet and carpet padding	0	0	0	0
	43	Clothing and other textiles	6.1	2.5	15.2	5.8
C&D	**44**	Construction and Demolition materials	0.8	1.7	17.9	131.9
MISC INORG.	**45**	Televisions	0	62.9	0	0
	46	Computer Monitors	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0.2
	48	Electronic Equipment	0	0.4	2.6	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	1.8	1.1	0	1.4
HHW	**50**	Household Hazardous Waste materials	6	0	0.6	0.1
SAMPLE DETAILS		Sample Name	CCICI4	CCICI5	CCICI6	CCICI7
		Sample Size (pounds)	233.5	198.3	214.1	232.3
		Truck Number	211522	414024	77	414533
		Time	8:58	9:43	11:50	13:45
		Davidson County Subarea	8	14	13	7
		USD/GSD/SAT	USD	USD	USD	USD
		Davidson County Grid				
		Private/Metro Hauler	Private	Private	Private	Private

Nashville Fall 2017 Event Raw Data (in pounds)

		Facility:	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS	WMTS
		Date:	10/20/17	10/20/17	10/20/17	10/20/17	10/20/17	10/20/17	10/20/17	10/20/17
	Material Group	Sample ID:	DDRES1	DDRES2	DDRES3	DDICI1	DDICI2	DDICI3	DDICI4	DDICI5
PAPER	**1**	Newsprint	7.1	2.2	3.1	0	0	2.7	0.1	0.3
	2	High Grade Office Paper	7.4	0.8	2.8	0	0.6	4.2	8	5.9
	3	Magazines/Catalogs	6.1	15.5	5.4	0	0	4.4	0.2	0
	4	Uncoated OCC	33.5	2.3	7.3	10.9	30.7	16.4	13.2	58.4
	5	Kraft	1.1	1.7	0.8	0	1.1	2.4	0.7	0.2
	6	Boxboard	6	6.6	7.7	161.1	0.7	12.8	5	5.5
	7	Mixed Paper - Recyclable	10.6	1.8	5.3	0	0.3	3	0	7.2
	8	Compostable Paper and 'other' paper	9.3	22.1	27.4	0	2.4	24.4	27.6	7.7
	9	Milk and Juice cartons/boxes, coated	0.1	0.4	0.3	0	0	0.5	0.1	0.1
PLASTICS	**10**	#1 PET Bottles/Jars	4.5	2.6	4.4	0	1.1	4.7	7.3	3.2
	11	#1 Other PET Containers & Packaging	0.5	1.1	1.8	0	0	0.8	0.3	0.1
	12	#2 HDPE Bottles/Jars - Clear	1.6	0.3	0.6	0	0.1	1.4	0.6	0.1
	13	#2 HDPE Bottles/ Jars - Color	1.5	2.3	1.8	0	0.8	2.5	1.1	0
	14	#2 Other HDPE Containers & Packaging	0	0	0	0	0	0	0	0
	15	#6 Expanded Polystyrene Packaging (EPS)	2.6	0.9	1.3	0	2	1.6	5.7	1.2
	16	#3-#7 Other - All	2.3	6.5	2.4	0	0.7	4.4	1.8	0.9
	17	Other Rigid Plastic Products	0.6	0.7	2.7	0	2.3	1.8	5.4	1.8
	18	Grocery & Merchandise Bags	1.8	1.7	1.6	0	0.1	3.8	4.9	1.4
	19	Trash Bags	2.2	3.2	4.9	0	0.3	4.2	4.1	1.5
	20	Commercial & Industrial Film	0	0	0	0	1	0	0	2.5
	21	Other Film	4.1	6.7	5.1	0	2.5	8.2	6.8	4.2
	22	Remainder/ Composite Plastic	1.8	1.4	1.3	0	0	6.2	1.3	0
GLASS	**23**	Glass Bottles and Jars - **clear**	7	2.8	3.7	0	0	9.4	22.6	0
	24	Glass Bottles and Jars - **brown**	4.8	0.6	1	0	0	1.2	8.9	0
	25	Glass Bottles and Jars - **green**	0.8	8.7	1.2	0	0	3.9	3.6	0
	26	Glass Bottles and Jars - **blue**	0	0	0	0	0	0	0.4	0
	27	Flat Glass	0.2	0	0	0	0	0	0	0
	28	Other Glass	0	0.1	0	0	0	0.4	0	0
ORGANICS	**29**	Yard Waste - Compostable; leaves, grass, branches <0.5"	0.3	0.7	15	0	2.1	0	0	0
	30	Yard Waste - Woody; branch >0.5"	0	0	0	0	1	0	0	0
	31	Food Scraps	38.4	53.6	33.2	0	7	49.5	42.9	69.7
	32	Bottom Fines and Dirt	0.1	0.4	4.3	0	0	0.1	0	0
	33	Diapers	6.8	1.8	1.3	0	0.7	14.3	7.6	0
	34	Other Organic	4.2	7.1	24.3	0	0.8	17.5	1.4	0
METALS	**35**	Aluminum Beverage Containers	1.6	1.5	2.2	0	0.1	2.5	3.2	0.5
	36	Other Aluminum	0.1	0.4	0.4	0	0.1	0.2	0.6	0
	37	Ferrous containers (bi-metal cans)	2.4	1.5	4.4	0	0.7	2.1	2.1	0.2
	38	Aerosol cans	0.1	0.7	0.5	0	0	0.1	0.2	0
	39	Other Ferrous	4.2	1	2.9	3	17.9	0.1	0.1	0.1
	40	Other Non-Ferrous	0	0	0	0	0.1	0	0	0
	41	Other Metal	2.5	0	0	0	0.1	0.1	0	0
TEXTILES	**42**	Carpet and carpet padding	0	0	0	0	0	0.1	0	0
	43	Clothing and other textiles	2.1	5	2.2	2.4	7.5	5.2	24.1	1.7
C&D	**44**	Construction and Demolition materials	1.2	0	2.3	34.9	53.5	0	0	24.6
MISC INORG.	**45**	Televisions	0	0	0	0	0	0	18.3	0
	46	Computer Monitors	0	0	0	0	0	0	0	0
	47	Computer Equipment/ Peripherals	0	0	0	0	0	0	0	0
	48	Electronic Equipment	0.1	0	0	0	0	0.2	0	0
	49	Household bulky items, batteries, tires, fluorescents, other misc. inorganics	0	2	24.6	0	29.3	4.3	41.4	11.6
HHW	**50**	Household Hazardous Waste materials	0.5	15.4	2.1	0	0.1	2.4	0.4	0
SAMPLE DETAILS		Sample Name	DDRES1	DDRES2	DDRES3	DDICI1	DDICI2	DDICI3	DDICI4	DDICI5
		Sample Size (pounds)	182.1	184.1	213.6	212.3	167.7	224	272	210.6
		Truck Number	20	4044	H50	415374	2533	211201	212912	3497
		Time	8:45	10:00	10:48	7:30	7:40	8:40	10:55	11:50
		Davidson County Subarea	13	10	13	14	11	6	13	11
		USD/GSD/SAT	GSD	GSD	USD	GSD	USD	GSD	USD	USD
		Davidson County Grid		144		53				
		Private/Metro Hauler	Private	Private	Private	Private	Private	Private	Private	Private

Appendix D
Photographs of Sorting Events

Sample EICI5 indicating sample collected at Republic Transfer Station on 7/17/17, where sample is from the ICI waste sector and the 5th ICI sample collected for the day.

Sample ERES1 indicating sample collected at Republic Transfer Station on 7/17/17, where sample is from the Residential waste sector and the 1st RES sample collected for the day.

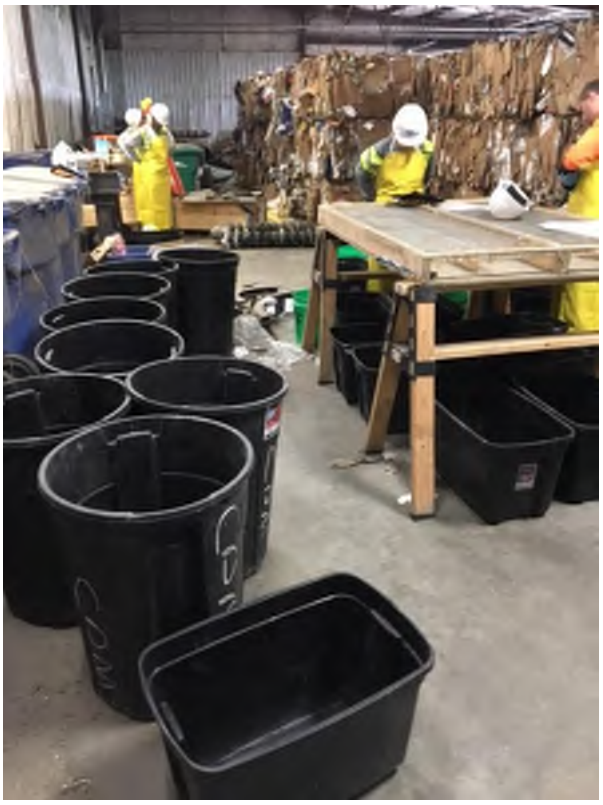
View of 3rd selected ICI load tipped in bay next to sort staff. Sample Coordinator maintains custody of selected truck and keeps sample placard with truck and sample.

Sample FICI3 is ~ 200 pounds of waste from the tipped load. Sample Coordinator stays with the sort staff and Crew Chief until sample is pulled and documented. Placard stay on sample until it is processed (sorted and weighed)

Sorting team at Republic Transfer Station showing plastic bins on right side of table, organics at near end, and unsorted sample on top of table.

Sample JICI2 indicating sample collected at Waste Management MRF on 7/21/17, where sample is from the ICI sector and the 2nd ICI recovered material sample collected for the day.

Fall Sort Photos:



Sort Table Set Up

Processing Sample

Plastic, metal, and aluminum containers

Weighting Material Bins Post Sort

Hand Sorting Table

Residential Hall Tipping