



## TECHNICAL MEMORANDUM NO. 2

**DATE:** April 20, 2015

**TO:** Jeff Cole, Recycling and Trash Collection Director  
City of Fayetteville, AR

Carlos Ochoa, Sustainability Director  
University of Arkansas

**FROM:** Robin Mitchell, Project Manager

**SUBJ:** **University of Arkansas Waste Composition Study**

**PROJ #:** 173-00.00

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### 1. Introduction

This technical memorandum provides the results of the University of Arkansas (University) Waste Composition Study (WCS) conducted by Kessler Consulting, Inc. (KCI) for the City of Fayetteville (City) and the University. The purpose of the WCS was to determine the percentage by weight of various types of materials found in solid waste disposed at the University. The results of the WCS will assist in identifying opportunities for expanding and enhancing waste diversion programs at the University.

Field work took place at Waste Management's Eco-Vista Landfill in Tontitown, AR from February 2-4, 2015. During the study, KCI pulled and manually hand-sorted 20 samples of solid waste, 5 samples from each of 4 generator sectors: Facilities Management, Housing, Arkansas Union, and Athletics.

The study included only waste collected in dumpsters, compactors, and roll-offs by the two contracted haulers, Waste Management and Deffenbaugh. It does not include debris from construction, demolition, or renovation projects; hazardous wastes; or other special segregated waste streams. Also worth noting is that no home athletic game occurred during the time the field work was conducted.

### 2. Methodology

KCI worked with City and University staff to develop a list of 36 material categories into which waste would be sorted (see Attachment A). To develop this list of material categories, KCI considered the following:

- Recyclable materials accepted in the University's recycling program.
- Additional types of materials that might potentially be recovered for recycling or composting in the future.

KCI prepared and City and University staff reviewed and approved a site safety plan and sampling and sorting protocol, which were followed throughout the field work. KCI provided a Study Supervisor,

Sorting Supervisor, additional labor to assist with sorting activities, all sorting equipment, and safety gear.

Several modifications were made to the initial scope of work and sampling and sorting protocol, as outlined below, to accommodate the University’s objectives and successfully complete the study. These modifications required an additional level of effort, which were absorbed by KCI.

- KCI expanded the scope to include four generator sectors (Facilities Management, Housing, Arkansas Union, and Athletics) rather than three.
- The scope of work anticipated working with a single point of contact at the University; however, KCI was asked to directly contact representatives from each generator sector and their contracted service providers to obtain the necessary information for planning the WCS.
- KCI anticipated conducting the sorting event at the same location as the City’s WCS, but was asked to change locations to the Eco-Vista Landfill to accommodate the contracted haulers. This required breakdown and re-mobilization of sorting equipment.
- The sampling and sorting protocol indicated that University staff from each generator sector would be responsible for coordinating with their respective contracted service provider to schedule the collection and delivery of waste to the sorting location. KCI assumed some of this responsibility to ensure delivery of the waste.
- Five samples from each generator sector were pulled instead of six samples. Because of harsh weather conditions and the open nature of the requested sorting location (working face of the landfill), sorting activities were suspended during the first day of the study. We do not believe this modification altered the validity of the study results. Table 1 provides the final sampling schedule.

**Table 1: University Sampling Schedule**

Generator Sector	Hauler	Collection Type	Delivery Schedule	Total Samples
Athletics	Waste Management	5 Open-Top Roll-Offs	One (1) Roll-off on Monday, February 2	3
			One (1) Roll-off on Tuesday, February 3	2
Facilities	Deffenbaugh	Several Carts/Dumpsters	Split Dumpster Route on Monday, February 2	5
Housing	Deffenbaugh	13 Compactors	One (1) Compactor on Tuesday, February 3	2
		Several Carts/Dumpsters	Split Dumpster Route on Monday, February 2	3
Student Union	Waste Management	1 Compactor	Wednesday, February 4	5
<b>Total Samples</b>				<b>20</b>

Following the field work, KCI analyzed the data as outlined in the *ASTM Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste (D5231-92; reapproved 2008)* to determine the percentage, by weight, of each material category for each of the four generator sectors. In addition to the weighted average, the 90 percent confidence interval was calculated for each

material category. The confidence interval indicates that, with a 90 percent level of confidence, the actual arithmetic mean (the arithmetic mean obtained if an infinite number of samples were sorted) is within the upper and lower limits shown. This provides an understanding of how much variation occurred in the quantity of that material category in the samples sorted. Generally, the more homogeneous the waste stream and the greater the number of samples sorted, the higher the level of accuracy achieved and the narrower the margin between the upper and lower bounds of the confidence interval.

Data for the four generator sectors was then combined, based on the quantity of waste each contributed to the waste stream in 2014 (as provided by University staff), to calculate the overall composition of University waste that is disposed. This is referred to throughout this memorandum as the University Aggregate Waste.

### 3. Results

The following tables and figures present the study results for each individual generator sector, as well as for the University Aggregate Waste. Material categories are grouped by their potential to be recycled through the University's existing recycling program, other potentially recyclable materials, organics, and all other waste.

- **Facilities Management** (Table 2 and Figure 1; Attachment B provides the individual sample data) – More than 35 percent of Facilities Management waste consisted of paper and containers that could be recycled. Low-grade paper, food waste, and other potentially compostable material comprised over 32 percent of the waste, while other potentially recyclable materials contributed nearly 14 percent to the waste.
- **Housing** (Table 3 and Figure 2; Attachment C provides the individual sample data) – More than 44 percent of Housing waste consisted of paper and containers that could be recycled. Food waste comprised more than 16 percent of the waste stream, and other compostable materials comprised nearly 11 percent. Other potentially recyclable materials contributed another 9 percent to the waste.
- **Arkansas Union** (Table 4 and Figure 3; Attachment D provides the individual sample data) – More than 51 percent of the Arkansas Union's waste was compostable, with low-grade paper and food waste contributing 28 and 23 percent, respectively. Recyclable paper and containers comprised nearly 21 percent of disposed waste.
- **Athletics** (Table 5 and Figure 4; Attachment E provides the individual sample data) – More than 40 percent of Athletics' waste consisted of compostable materials, with food waste and low-grade paper contributing 21 percent and nearly 19 percent, respectively. Recyclable paper and containers comprised over 32 percent.
- **University Aggregate Waste** – Table 6 and Figure 5 present the combined composition of the University waste from the 4 generator sectors based on the relative amount of each stream disposed in 2014. Nearly 37 percent of the University Aggregate Waste consisted of recyclable paper and containers and 33 percent was comprised of potentially compostable materials. Tables 7 and 8 convert these percentages to estimated metric tons and short tons, respectively, of each material type disposed in 2014. It should be noted that the quantity of waste disposed in dumpsters is estimated by the haulers; therefore, the accuracy is uncertain.

Figure 6 depicts the overall composition of materials generated at the University in 2014, based on data provided by University staff and results of the WCS. While no recycling program captures 100 percent of targeted materials, expanding and enhancing the University's existing paper and container recycling programs has the potential to increase its waste diversion rate by up to 30 percent. Facilities Management and Housing offer the greatest opportunity to recover additional tons of these materials (see Figure 7). Developing comprehensive programs to capture other types of potentially recyclable materials (scrap metals, all plastic containers and packaging, bulky rigid plastics, electronics, and aseptic containers) has the potential to increase the diversion rate by an additional 9 percent. The addition of these materials depends on the availability of viable end-users or markets.

Implementing a comprehensive food waste recovery program has the potential to increase the University's diversion rate by up to 13 percent. Facilities Management and Housing also generate the largest quantities of food waste. Expanding the composting program to include other types of biodegradable materials, primarily low-grade paper, could potentially divert an additional 14 percent of waste from disposal.

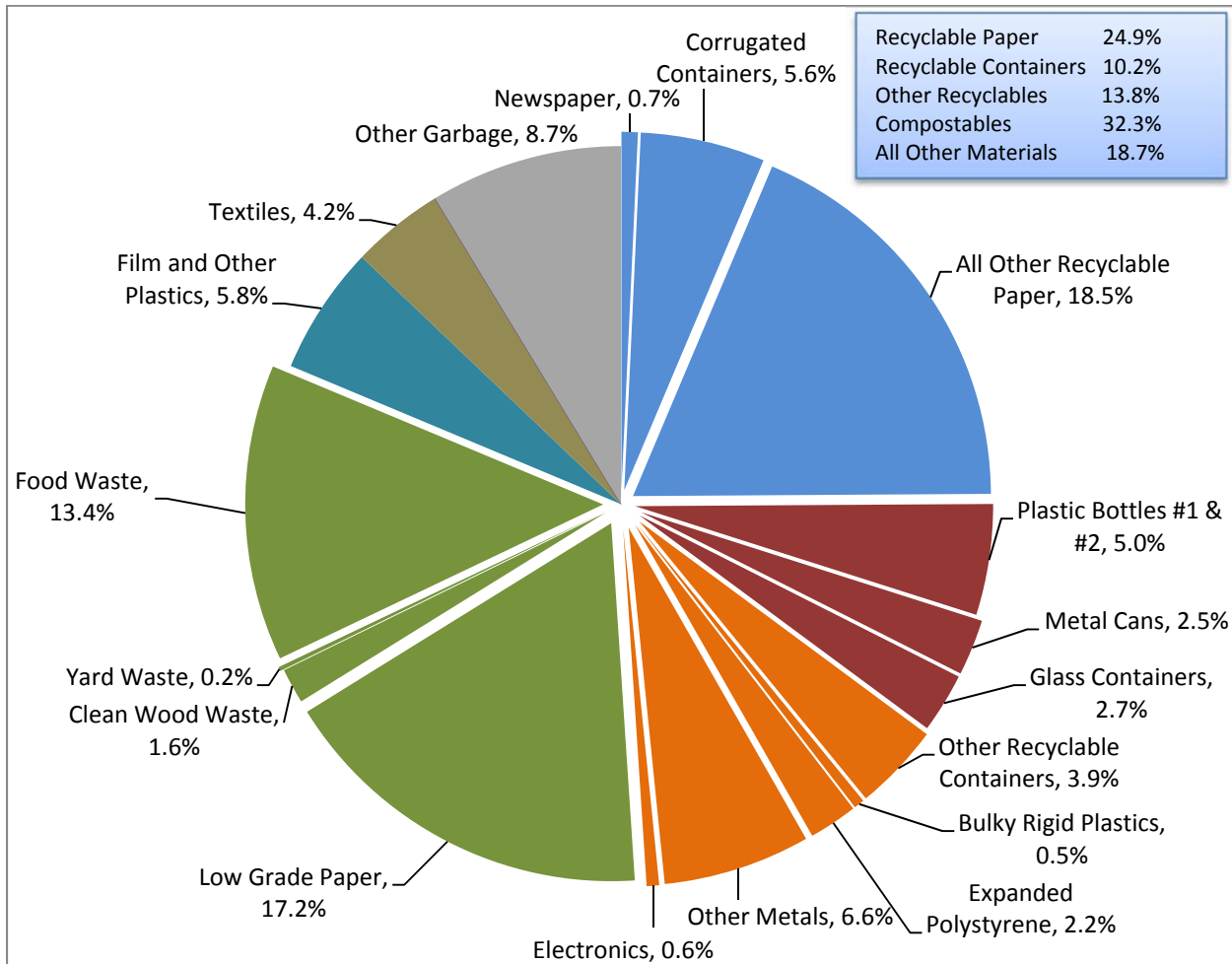
As can be seen by Figure 6, striving to achieve the University's zero waste goal (90 percent diversion) by 2021 would require aggressive policies, programs, and infrastructure to maximize the recovery of potentially recyclable or compostable materials. KCI appreciates the opportunity to conduct this study for the University and is available to assist as the results of the study are used to target each sector for increased diversion.

**Table 2: Composition of Facilities Management’s Disposed Waste (% by weight)**

Material Category		Weighted Average	90% Confidence Interval	
			Lower Bounds	Upper Bounds
1	Newspaper	0.7%	0.2%	1.3%
2	Corrugated Containers	5.6%	2.3%	8.9%
3	Office Paper	3.3%	1.6%	4.9%
4	Other Recyclable Paper	15.3%	8.7%	21.9%
<b>Total Accepted Recyclable Paper</b>		<b>24.9%</b>		
7	PET Bottles	4.0%	0.6%	7.5%
8	HDPE Bottles	1.0%	0.4%	1.6%
15	Tin/Steel Cans	1.0%	0.6%	1.4%
18	Aluminum Cans	1.5%	0.0%	3.0%
20	Glass Containers	2.7%	-0.3%	5.7%
<b>Total Accepted Recyclable Containers</b>		<b>10.2%</b>		
6	Aseptic Containers	0.2%	0.0%	0.4%
9	Other Non-Bottle Plastics #1 and #2	0.8%	0.0%	1.6%
10	Other Plastic Containers (#3-#7)	3.0%	0.8%	5.1%
11	Bulky Rigid Plastics	0.5%	-0.2%	1.2%
13A	EPS Food Service	0.9%	0.5%	1.3%
13B	EPS Packaging	1.3%	-0.6%	3.2%
16	White Goods/Small Appliances	0.0%	0.0%	0.0%
17	Other Ferrous	6.4%	-3.4%	16.1%
19	Other Non-Ferrous	0.3%	0.0%	0.5%
24	Electronics	0.6%	-0.7%	1.8%
<b>Total Potentially Recyclable Materials</b>		<b>13.8%</b>		
5	Low Grade Paper	17.2%	10.8%	23.6%
26	Clean Wood Waste	1.6%	-1.6%	4.8%
30	Yard Waste	0.2%	-0.2%	0.6%
31	Food Waste	13.4%	9.3%	17.4%
<b>Total Organics</b>		<b>32.3%</b>		
12A	Retail Bags	0.7%	0.6%	0.9%
12B	Non-Rigid Plastic Film	4.0%	1.6%	6.4%
14	All Other Plastics	1.1%	0.7%	1.4%
21	Other Glass	0.1%	-0.1%	0.3%
22	Textiles	4.2%	-2.5%	10.9%
23	Special Wastes	1.4%	-1.8%	4.7%
25	Household Batteries	0.0%	0.0%	0.0%
27	Treated Wood Waste	0.0%	0.0%	0.0%
28	C&D Debris	0.0%	0.0%	0.0%
29	Tires and Rubber	0.0%	0.0%	0.0%
32	All Other Garbage	5.2%	2.1%	8.3%
33	Liquids	2.0%	0.5%	3.5%
34	Grit	0.0%	0.0%	0.0%
<b>Total All Other Materials</b>		<b>18.7%</b>		
<b>TOTAL</b>		<b>100.0%</b>		

Note: Columns might not appear to add correctly due to rounding.

**Figure 1: Composition of Facilities Management’s Disposed Waste (% by weight)**



Note: For the purpose of this chart:

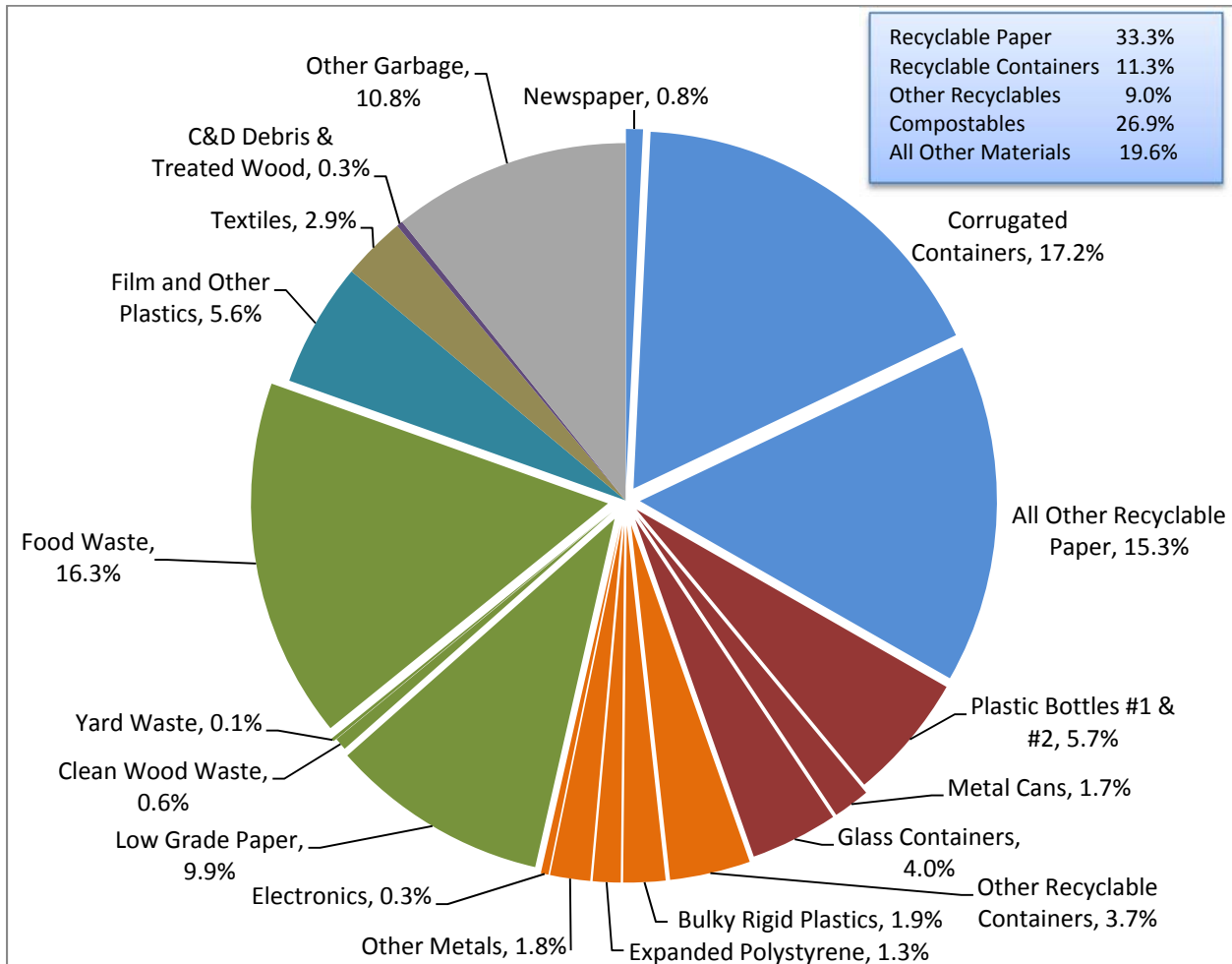
- All Other Recyclable Paper includes the categories of Office Paper and Other Recyclable Paper.
- Plastic Bottles #1 & #2 includes the categories of PET Bottles and HDPE Bottles.
- Metal Cans includes the categories of Aluminum Cans and Tin/Steel Cans.
- Other Recyclable Containers includes the categories of Aseptic Containers, Other Non-Bottle Plastics #1 and #2, and Other Plastic Containers (#3-#7).
- Expanded polystyrene includes the categories of EPS Food Service and EPS Packaging.
- Other Metals includes the categories of White Goods/Small Appliances, Other Ferrous, and Other Non-Ferrous.
- Film and Other Plastics includes the categories of Retail Bags, Non-Rigid Plastic Film, and All Other Plastics.
- Other Garbage includes the categories of Other Glass, Special Wastes, Household Batteries, Tires and Rubber, All Other Garbage, Grit, and Liquids.

**Table 3: Composition of Housing’s Disposed Waste (% by weight)**

Material Category		Weighted Average	90% Confidence Interval	
			Lower Bounds	Upper Bounds
1	Newspaper	0.8%	0.4%	1.1%
2	Corrugated Containers	17.2%	1.6%	32.7%
3	Office Paper	4.9%	3.2%	6.5%
4	Other Recyclable Paper	10.5%	2.5%	18.4%
<b>Total Accepted Recyclable Paper</b>		<b>33.3%</b>		
7	PET Bottles	3.9%	2.6%	5.2%
8	HDPE Bottles	1.9%	0.2%	3.5%
15	Tin/Steel Cans	1.1%	0.6%	1.5%
18	Aluminum Cans	0.6%	0.5%	0.7%
20	Glass Containers	4.0%	2.3%	5.6%
<b>Total Accepted Recyclable Containers</b>		<b>11.3%</b>		
6	Aseptic Containers	0.5%	0.2%	0.7%
9	Other Non-Bottle Plastics #1 and #2	1.1%	0.4%	1.9%
10	Other Plastic Containers (#3-#7)	2.0%	1.6%	2.4%
11	Bulky Rigid Plastics	1.9%	1.0%	2.8%
13A	EPS Food Service	0.9%	0.4%	1.3%
13B	EPS Packaging	0.4%	0.0%	0.7%
16	White Goods/Small Appliances	0.0%	0.0%	0.0%
17	Other Ferrous	1.4%	-0.4%	3.3%
19	Other Non-Ferrous	0.4%	0.2%	0.6%
24	Electronics	0.3%	0.1%	0.6%
<b>Total Potentially Recyclable Materials</b>		<b>9.0%</b>		
5	Low Grade Paper	9.9%	6.5%	13.2%
26	Clean Wood Waste	0.6%	-0.2%	1.3%
30	Yard Waste	0.1%	-0.1%	0.4%
31	Food Waste	16.3%	9.1%	23.4%
<b>Total Organics</b>		<b>26.9%</b>		
12A	Retail Bags	1.1%	0.1%	2.0%
12B	Non-Rigid Plastic Film	3.3%	2.2%	4.5%
14	All Other Plastics	1.3%	0.7%	1.8%
21	Other Glass	0.7%	0.1%	1.2%
22	Textiles	2.9%	0.8%	5.0%
23	Special Wastes	2.1%	-2.1%	6.3%
25	Household Batteries	0.2%	0.0%	0.4%
27	Treated Wood Waste	0.1%	-0.1%	0.4%
28	C&D Debris	0.2%	-0.2%	0.5%
29	Tires and Rubber	0.1%	-0.1%	0.3%
32	All Other Garbage	4.0%	3.4%	4.6%
33	Liquids	2.0%	0.0%	4.0%
34	Grit	1.6%	0.2%	3.1%
<b>Total All Other Materials</b>		<b>19.6%</b>		
<b>TOTALS</b>		<b>100.0%</b>		

Note: Columns might not appear to add correctly due to rounding.

**Figure 2: Composition of Housing’s Disposed Waste (% by weight)**



Note: For the purpose of this chart:

- All Other Recyclable Paper includes the categories of Office Paper and Other Recyclable Paper.
- Plastic Bottles #1 & #2 includes the categories of PET Bottles and HDPE Bottles.
- Metal Cans includes the categories of Aluminum Cans and Tin/Steel Cans.
- Other Recyclable Containers includes the categories of Aseptic Containers, Other Non-Bottle Plastics #1 and #2, and Other Plastic Containers (#3-#7).
- Expanded polystyrene includes the categories of EPS Food Service and EPS Packaging.
- Other Metals includes the categories of White Goods/Small Appliances, Other Ferrous, and Other Non-Ferrous.
- Film and Other Plastics includes the categories of Retail Bags, Non-Rigid Plastic Film, and All Other Plastics.
- Other Garbage includes the categories of Other Glass, Special Wastes, Household Batteries, Tires and Rubber, All Other Garbage, Grit, and Liquids.

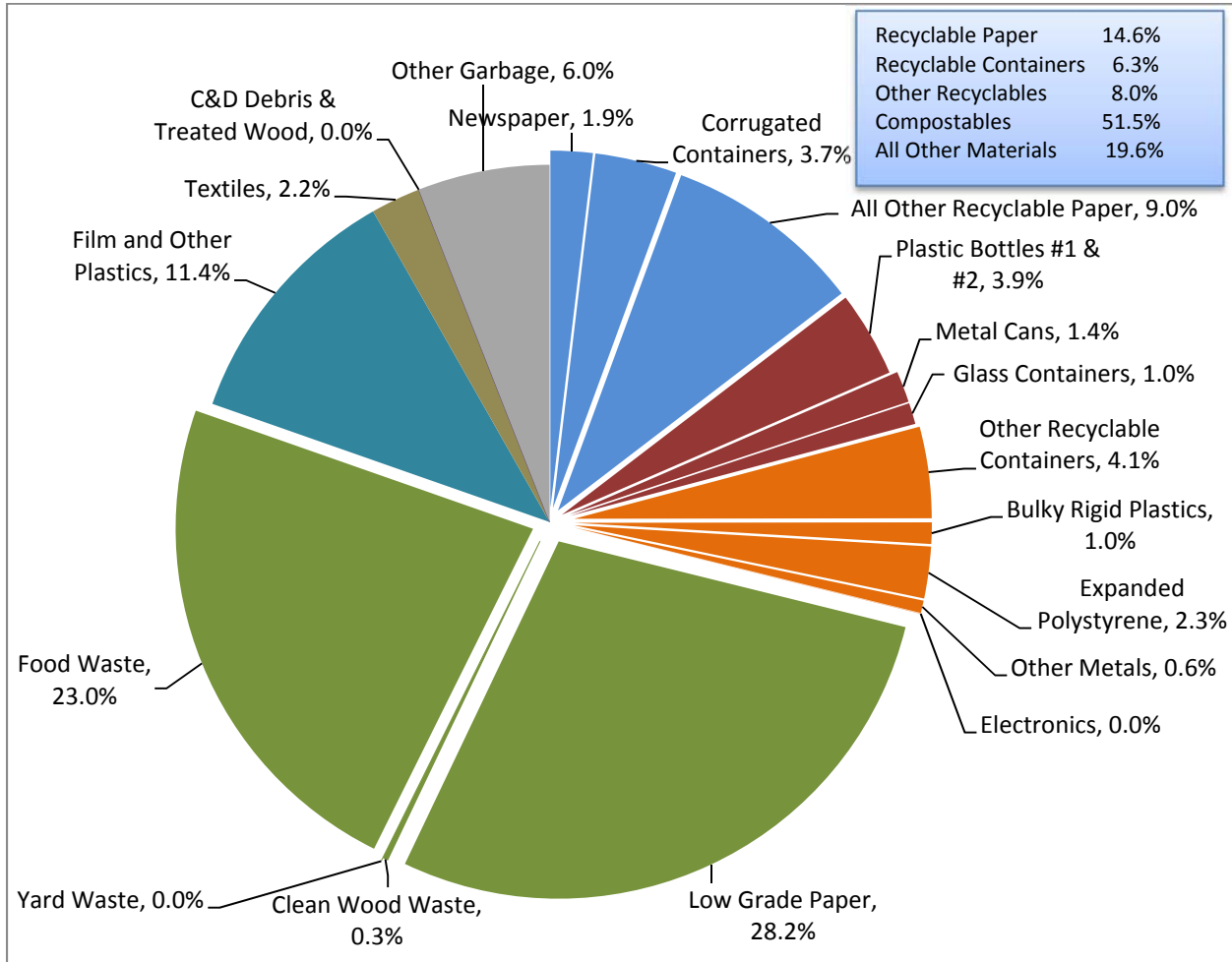


**Table 4: Composition of Arkansas Union’s Disposed Waste (% by weight)**

Material Category		Weighted Average	90% Confidence Interval	
			Lower Bounds	Upper Bounds
1	Newspaper	1.9%	0.0%	3.8%
2	Corrugated Containers	3.7%	2.2%	5.2%
3	Office Paper	2.3%	1.1%	3.4%
4	Other Recyclable Paper	6.7%	5.0%	8.4%
<b>Total Accepted Recyclable Paper</b>		<b>14.6%</b>		
7	PET Bottles	2.2%	0.8%	3.6%
8	HDPE Bottles	1.7%	0.8%	2.5%
15	Tin/Steel Cans	1.1%	0.6%	1.6%
18	Aluminum Cans	0.4%	0.1%	0.6%
20	Glass Containers	1.0%	0.1%	1.8%
<b>Total Accepted Recyclable Containers</b>		<b>6.3%</b>		
6	Aseptic Containers	0.2%	0.0%	0.4%
9	Other Non-Bottle Plastics #1 and #2	2.5%	1.2%	3.7%
10	Other Plastic Containers (#3-#7)	1.4%	1.1%	1.8%
11	Bulky Rigid Plastics	1.0%	0.3%	1.6%
13A	EPS Food Service	2.1%	1.3%	3.0%
13B	EPS Packaging	0.2%	-0.1%	0.5%
16	White Goods/Small Appliances	0.0%	0.0%	0.0%
17	Other Ferrous	0.3%	-0.2%	0.7%
19	Other Non-Ferrous	0.3%	0.0%	0.6%
24	Electronics	0.0%	0.0%	0.1%
<b>Total Potentially Recyclable Materials</b>		<b>8.0%</b>		
5	Low Grade Paper	28.2%	20.5%	36.0%
26	Clean Wood Waste	0.3%	0.0%	0.5%
30	Yard Waste	0.0%	0.0%	0.0%
31	Food Waste	23.0%	14.5%	31.5%
<b>Total Organics</b>		<b>51.5%</b>		
12A	Retail Bags	0.5%	-0.1%	1.1%
12B	Non-Rigid Plastic Film	8.5%	7.5%	9.4%
14	All Other Plastics	2.4%	1.4%	3.5%
21	Other Glass	0.0%	0.0%	0.1%
22	Textiles	2.2%	0.4%	4.1%
23	Special Wastes	0.1%	-0.1%	0.2%
25	Household Batteries	0.0%	0.0%	0.1%
27	Treated Wood Waste	0.0%	0.0%	0.0%
28	C&D Debris	0.0%	0.0%	0.0%
29	Tires and Rubber	0.0%	0.0%	0.0%
32	All Other Garbage	3.2%	2.0%	4.5%
33	Liquids	2.3%	1.1%	3.4%
34	Grit	0.3%	-0.4%	1.1%
<b>Total All Other Materials</b>		<b>19.6%</b>		
<b>TOTALS</b>		<b>100.0%</b>		

Note: Columns might not appear to add correctly due to rounding.

**Figure 3: Composition of Arkansas Union’s Disposed Waste (% by weight)**



Note: For the purpose of this chart:

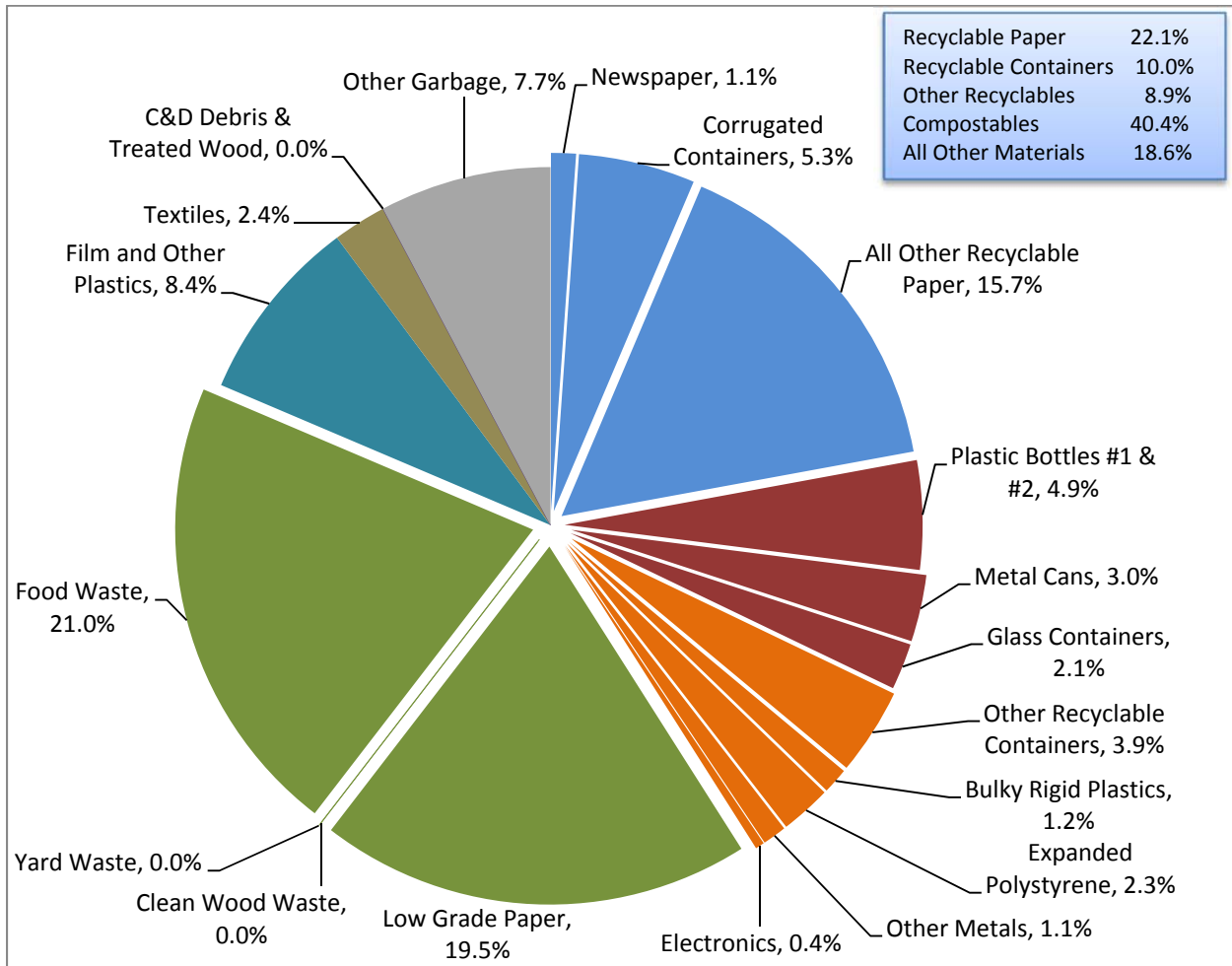
- All Other Recyclable Paper includes the categories of Office Paper and Other Recyclable Paper.
- Plastic Bottles #1 & #2 includes the categories of PET Bottles and HDPE Bottles.
- Metal Cans includes the categories of Aluminum Cans and Tin/Steel Cans.
- Other Recyclable Containers includes the categories of Aseptic Containers, Other Non-Bottle Plastics #1 and #2, and Other Plastic Containers (#3-#7).
- Expanded polystyrene includes the categories of EPS Food Service and EPS Packaging.
- Other Metals includes the categories of White Goods/Small Appliances, Other Ferrous, and Other Non-Ferrous.
- Film and Other Plastics includes the categories of Retail Bags, Non-Rigid Plastic Film, and All Other Plastics.
- Other Garbage includes the categories of Other Glass, Special Wastes, Household Batteries, Tires and Rubber, All Other Garbage, Grit, and Liquids.

**Table 5: Composition of Athletics’ Disposed Waste (% by weight)**

Material Category		Weighted Average	90% Confidence Interval	
			Lower Bounds	Upper Bounds
1	Newspaper	1.1%	0.3%	2.0%
2	Corrugated Containers	5.3%	1.9%	8.6%
3	Office Paper	7.2%	1.1%	13.2%
4	Other Recyclable Paper	8.5%	6.4%	10.6%
<b>Total Accepted Recyclable Paper</b>		<b>22.1%</b>		
7	PET Bottles	3.5%	1.3%	5.7%
8	HDPE Bottles	1.4%	0.4%	2.4%
15	Tin/Steel Cans	0.8%	0.2%	1.5%
18	Aluminum Cans	2.2%	-0.3%	4.6%
20	Glass Containers	2.1%	0.4%	3.8%
<b>Total Accepted Recyclable Containers</b>		<b>10.0%</b>		
6	Aseptic Containers	0.2%	0.0%	0.5%
9	Other Non-Bottle Plastics #1 and #2	1.1%	0.1%	2.2%
10	Other Plastic Containers (#3-#7)	2.6%	1.6%	3.5%
11	Bulky Rigid Plastics	1.2%	-0.5%	2.8%
13A	EPS Food Service	1.4%	1.0%	1.8%
13B	EPS Packaging	0.9%	-0.4%	2.2%
16	White Goods/Small Appliances	0.0%	0.0%	0.0%
17	Other Ferrous	0.4%	-0.4%	1.2%
19	Other Non-Ferrous	0.7%	0.5%	0.9%
24	Electronics	0.4%	-0.2%	1.0%
<b>Total Potentially Recyclable Materials</b>		<b>8.9%</b>		
5	Low Grade Paper	19.5%	11.2%	27.7%
26	Clean Wood Waste	0.0%	0.0%	0.0%
30	Yard Waste	0.0%	0.0%	0.0%
31	Food Waste	21.0%	14.8%	27.1%
<b>Total Organics</b>		<b>40.4%</b>		
12A	Retail Bags	0.4%	0.0%	0.7%
12B	Non-Rigid Plastic Film	6.7%	6.1%	7.3%
14	All Other Plastics	1.3%	0.9%	1.8%
21	Other Glass	0.0%	0.0%	0.0%
22	Textiles	2.4%	0.5%	4.4%
23	Special Wastes	0.2%	-0.2%	0.6%
25	Household Batteries	0.1%	-0.1%	0.2%
27	Treated Wood Waste	0.0%	0.0%	0.0%
28	C&D Debris	0.0%	0.0%	0.0%
29	Tires and Rubber	0.0%	0.0%	0.0%
32	All Other Garbage	3.3%	2.0%	4.7%
33	Liquids	4.0%	2.2%	5.8%
34	Grit	0.2%	-0.2%	0.6%
<b>Total All Other Materials</b>		<b>18.6%</b>		
<b>TOTALS</b>		<b>100.0%</b>		

Note: Columns might not appear to add correctly due to rounding.

**Figure 4: Composition of Athletics' Disposed Waste (% by weight)**



Note: For the purpose of this chart:

- All Other Recyclable Paper includes the categories of Office Paper and Other Recyclable Paper.
- Plastic Bottles #1 & #2 includes the categories of PET Bottles and HDPE Bottles.
- Metal Cans includes the categories of Aluminum Cans and Tin/Steel Cans.
- Other Recyclable Containers includes the categories of Aseptic Containers, Other Non-Bottle Plastics #1 and #2, and Other Plastic Containers (#3-#7).
- Expanded polystyrene includes the categories of EPS Food Service and EPS Packaging.
- Other Metals includes the categories of White Goods/Small Appliances, Other Ferrous, and Other Non-Ferrous.
- Film and Other Plastics includes the categories of Retail Bags, Non-Rigid Plastic Film, and All Other Plastics.
- Other Garbage includes the categories of Other Glass, Special Wastes, Household Batteries, Tires and Rubber, All Other Garbage, Grit, and Liquids.

**Table 6: Composition of University Aggregate Waste Disposed (% by weight)**

Material Category		Facilities Management	Housing	Arkansas Union	Athletics	University Aggregate
1	Newspaper	0.7%	0.8%	1.9%	1.1%	0.9%
2	Corrugated Containers	5.6%	17.2%	3.7%	5.3%	9.1%
3	Office Paper	3.3%	4.9%	2.3%	7.2%	4.1%
4	Other Recyclable Paper	15.3%	10.5%	6.7%	8.5%	12.3%
<b>Total Accepted Recyclable Paper</b>		<b>24.9%</b>	<b>33.3%</b>	<b>14.6%</b>	<b>22.1%</b>	<b>26.4%</b>
7	PET Containers	4.0%	3.9%	2.2%	3.5%	3.8%
8	HDPE Containers	1.0%	1.9%	1.7%	1.4%	1.4%
15	Tin/Steel Cans	1.0%	1.1%	1.1%	0.8%	1.0%
18	Aluminum Cans	1.5%	0.6%	0.4%	2.2%	1.2%
20	Glass Containers	2.7%	4.0%	1.0%	2.1%	2.9%
<b>Total Accepted Recyclable Containers</b>		<b>10.2%</b>	<b>11.3%</b>	<b>6.3%</b>	<b>10.0%</b>	<b>10.2%</b>
6	Aseptic Containers	0.2%	0.5%	0.2%	0.2%	0.3%
9	Other Non-Bottle Plastics #1 and #2	0.8%	1.1%	2.5%	1.1%	1.1%
10	Other Plastic Containers (#3-#7)	3.0%	2.0%	1.4%	2.6%	2.5%
11	Bulky Rigid Plastics	0.5%	1.9%	1.0%	1.2%	1.0%
13A	EPS Food Service	0.9%	0.9%	2.1%	1.4%	1.1%
13B	EPS Packaging	1.3%	0.4%	0.2%	0.9%	0.9%
16	White Goods/Small Appliances	0.0%	0.0%	0.0%	0.0%	0.0%
17	Other Ferrous	6.4%	1.4%	0.3%	0.4%	3.6%
19	Other Non-Ferrous	0.3%	0.4%	0.3%	0.7%	0.3%
24	Electronics	0.6%	0.3%	0.0%	0.4%	0.4%
<b>Total Potentially Recyclable Materials</b>		<b>13.8%</b>	<b>9.0%</b>	<b>8.0%</b>	<b>8.9%</b>	<b>11.2%</b>
5	Low Grade Paper	17.2%	9.9%	28.2%	19.5%	16.0%
26	Clean Wood Waste	1.6%	0.6%	0.3%	0.0%	1.0%
30	Yard Waste	0.2%	0.1%	0.0%	0.0%	0.1%
31	Food Waste	13.4%	16.3%	23.0%	21.0%	15.9%
<b>Total Organics</b>		<b>32.3%</b>	<b>26.9%</b>	<b>51.5%</b>	<b>40.4%</b>	<b>33.1%</b>
12A	Retail Bags	0.7%	1.1%	0.5%	0.4%	0.8%
12B	Non-Rigid Plastic Film	4.0%	3.3%	8.5%	6.7%	4.5%
14	All Other Plastics	1.1%	1.3%	2.4%	1.3%	1.3%
21	Other Glass	0.1%	0.7%	0.0%	0.0%	0.3%
22	Textiles	4.2%	2.9%	2.2%	2.4%	3.4%
23	Special Wastes	1.4%	2.1%	0.1%	0.2%	1.4%
25	Household Batteries	0.0%	0.2%	0.0%	0.1%	0.1%
27	Treated Wood Waste	0.0%	0.1%	0.0%	0.0%	0.0%
28	C&D Debris	0.0%	0.2%	0.0%	0.0%	0.0%
29	Tires and Rubber	0.0%	0.1%	0.0%	0.0%	0.0%
32	All Other Garbage	5.2%	4.0%	3.2%	3.3%	4.4%
33	Liquids	2.0%	2.0%	2.3%	4.0%	2.2%
34	Grit	0.0%	1.6%	0.3%	0.2%	0.6%
<b>Total All Other Materials</b>		<b>18.7%</b>	<b>19.6%</b>	<b>19.6%</b>	<b>18.6%</b>	<b>19.0%</b>
<b>TOTALS</b>		<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Note: Columns might not appear to add correctly due to rounding.

**Table 7: Estimated Metric Tons of University Aggregate Waste Disposed, 2014**

Material Category		Facilities Management	Housing	Arkansas Union	Athletics	University Aggregate
1	Newspaper	10	7	5	3	26
2	Corrugated Containers	79	159	9	16	263
3	Office Paper	46	45	6	22	119
4	Other Recyclable Paper	216	97	16	26	355
<b>Total Accepted Recyclable Paper</b>		<b>352</b>	<b>307</b>	<b>36</b>	<b>67</b>	<b>762</b>
7	PET Containers	57	36	5	11	108
8	HDPE Containers	14	17	4	4	40
15	Tin/Steel Cans	14	10	3	3	29
18	Aluminum Cans	22	6	1	7	35
20	Glass Containers	38	37	2	6	83
<b>Total Accepted Recyclable Containers</b>		<b>145</b>	<b>105</b>	<b>15</b>	<b>31</b>	<b>295</b>
6	Aseptic Containers	2	4	1	1	8
9	Other Non-Bottle Plastics #1 and #2	11	10	6	3	31
10	Other Plastic Containers (#3-#7)	42	19	4	8	72
11	Bulky Rigid Plastics	7	18	2	4	30
13A	EPS Food Service	13	8	5	4	31
13B	EPS Packaging	18	4	0	3	25
16	White Goods/Small Appliances	0	0	0	0	0
17	Other Ferrous	90	13	1	1	105
19	Other Non-Ferrous	4	4	1	2	10
24	Electronics	8	3	0	1	12
<b>Total Potentially Recyclable Materials</b>		<b>195</b>	<b>83</b>	<b>20</b>	<b>27</b>	<b>325</b>
5	Low Grade Paper	243	91	69	59	463
26	Clean Wood Waste	22	5	1	0	28
30	Yard Waste	3	1	0	0	4
31	Food Waste	189	150	57	64	460
<b>Total Organics</b>		<b>457</b>	<b>248</b>	<b>126</b>	<b>123</b>	<b>955</b>
12A	Retail Bags	10	10	1	1	22
12B	Non-Rigid Plastic Film	57	31	21	21	129
14	All Other Plastics	15	12	6	4	37
21	Other Glass	1	6	0	0	8
22	Textiles	59	27	6	7	99
23	Special Wastes	20	19	0	1	40
25	Household Batteries	0	2	0	0	2
27	Treated Wood Waste	0	1	0	0	1
28	C&D Debris	0	1	0	0	1
29	Tires and Rubber	0	1	0	0	1
32	All Other Garbage	73	37	8	10	128
33	Liquids	28	19	6	12	65
34	Grit	0	15	1	1	17
<b>Total All Other Materials</b>		<b>264</b>	<b>181</b>	<b>48</b>	<b>57</b>	<b>550</b>
<b>TOTALS</b>		<b>1,413</b>	<b>924</b>	<b>245</b>	<b>304</b>	<b>2,886</b>

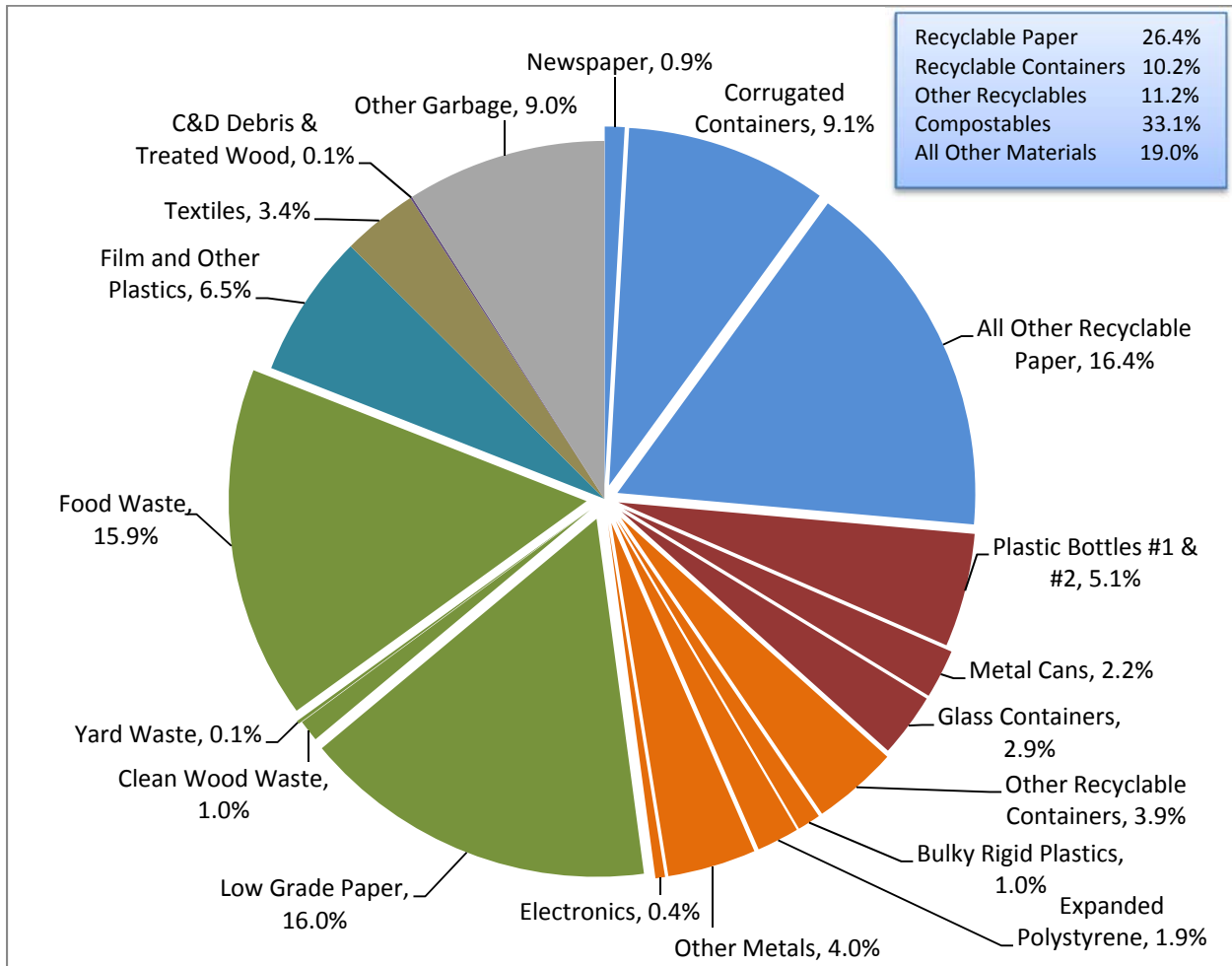
Note: Columns might not appear to add correctly due to rounding.

**Table 8: Estimated Short Tons of University Aggregate Waste Disposed, 2014**

Material Category		Facilities Management	Housing	Arkansas Union	Athletics	University Aggregate
1	Newspaper	12	8	5	4	28
2	Corrugated Containers	87	175	10	18	290
3	Office Paper	51	50	6	24	131
4	Other Recyclable Paper	238	107	18	29	391
<b>Total Accepted Recyclable Paper</b>		<b>388</b>	<b>339</b>	<b>39</b>	<b>74</b>	<b>840</b>
7	PET Containers	62	39	6	12	120
8	HDPE Containers	16	19	5	5	44
15	Tin/Steel Cans	16	11	3	3	32
18	Aluminum Cans	24	6	1	7	38
20	Glass Containers	42	40	3	7	92
<b>Total Accepted Recyclable Containers</b>		<b>159</b>	<b>116</b>	<b>17</b>	<b>34</b>	<b>326</b>
6	Aseptic Containers	2	5	1	1	9
9	Other Non-Bottle Plastics #1 and #2	13	12	7	4	35
10	Other Plastic Containers (#3-#7)	46	21	4	9	80
11	Bulky Rigid Plastics	7	19	3	4	33
13A	EPS Food Service	14	9	6	5	34
13B	EPS Packaging	20	4	1	3	27
16	White Goods/Small Appliances	0	0	0	0	0
17	Other Ferrous	99	15	1	1	116
19	Other Non-Ferrous	4	4	1	2	11
24	Electronics	9	4	0	1	14
<b>Total Potentially Recyclable Materials</b>		<b>215</b>	<b>91</b>	<b>22</b>	<b>30</b>	<b>358</b>
5	Low Grade Paper	268	101	76	65	510
26	Clean Wood Waste	25	6	1	0	31
30	Yard Waste	3	1	0	0	4
31	Food Waste	208	166	62	70	507
<b>Total Organics</b>		<b>504</b>	<b>274</b>	<b>139</b>	<b>136</b>	<b>1,052</b>
12A	Retail Bags	11	11	1	1	25
12B	Non-Rigid Plastic Film	62	34	23	23	142
14	All Other Plastics	17	13	7	4	41
21	Other Glass	2	7	0	0	8
22	Textiles	65	29	6	8	109
23	Special Wastes	22	21	0	1	44
25	Household Batteries	0	2	0	0	2
27	Treated Wood Waste	0	1	0	0	1
28	C&D Debris	0	2	0	0	2
29	Tires and Rubber	0	1	0	0	1
32	All Other Garbage	81	41	9	11	141
33	Liquids	31	21	6	13	71
34	Grit	0	17	1	1	18
<b>Total All Other Materials</b>		<b>291</b>	<b>199</b>	<b>53</b>	<b>62</b>	<b>606</b>
<b>TOTALS</b>		<b>1,557</b>	<b>1,018</b>	<b>271</b>	<b>336</b>	<b>3,182</b>

Note: Columns might not appear to add correctly due to rounding.

**Figure 5: Composition of University Aggregate Waste Disposed (% by weight)**



Note: For the purpose of this chart:

- All Other Recyclable Paper includes the categories of Office Paper and Other Recyclable Paper.
- Plastic Bottles #1 & #2 includes the categories of PET Bottles and HDPE Bottles.
- Metal Cans includes the categories of Aluminum Cans and Tin/Steel Cans.
- Other Recyclable Containers includes the categories of Aseptic Containers, Other Non-Bottle Plastics #1 and #2, and Other Plastic Containers (#3-#7).
- Expanded polystyrene includes the categories of EPS Food Service and EPS Packaging.
- Other Metals includes the categories of White Goods/Small Appliances, Other Ferrous, and Other Non-Ferrous.
- Film and Other Plastics includes the categories of Retail Bags, Non-Rigid Plastic Film, and All Other Plastics.
- Other Garbage includes the categories of Other Glass, Special Wastes, Household Batteries, Tires and Rubber, All Other Garbage, Grit, and Liquids.





**ATTACHMENT A – Material Category Descriptions**

#	Material Categories	Description of Categories
1	<b>Newspaper</b>	Newspaper (loose, tied, or shredded) including other paper normally distributed inside newspaper such as ads, flyers, etc.
2	<b>Corrugated Cardboard (OCC)</b>	Uncoated brown "cardboard" boxes with a wavy core (no plastic liners, waxy coatings).
3	<b>Office Paper</b>	Printed or unprinted paper typically generated in an office environment including white, colored, coated and uncoated papers, and manila and pastel colored file folders.
4	<b>Other Recyclable Paper</b>	All magazines, catalogs, paperboard, chipboard, brown paper bags, telephone books, and other printed material on glossy and non-glossy paper.
5	<b>Low Grade Paper</b>	All remaining paper not categorized in other paper categories, including waxy cardboard and contaminated paper (i.e., napkins, pizza boxes, paper towels, fast-food wrappers, etc.).
6	<b>Aseptic Containers</b>	Gable top milk cartons, juice boxes, and other similar containers.
7	<b>Polyethylene terephthalate (PET) Bottles (SPI #1)</b>	Clear and colored bottles or jars coded PET #1 such as soda bottles, water bottles, etc. These bottles/jars will typically have a screw-on lid or cap.
8	<b>High-density polyethylene (HDPE) Bottles (SPI #2)</b>	Clear/natural and pigmented bottles or jars coded HDPE #2 such as milk jugs, detergent bottles, etc. These bottles/jars will typically have a screw-on lid or cap.
9	<b>Other Non-Bottle Plastics #1 and #2</b>	Clear and colored plastic items labeled PET #1 such as clamshell containers, frozen food trays, disposable cups, and other items labeled PET #1. Also includes wide-mouthed tubs and containers labeled HDPE #2 including lids. Examples include yogurt cups, margarine tubs, Cool Whip® tubs, and other non-bottle HDPE items.
10	<b>Other Recyclable Plastic Containers</b>	All other plastic containers and cups, sometimes coded #3-#7.
11	<b>Bulky Rigid Plastics</b>	Consists of non-container rigid plastic items such as plastic drums, crates, buckets, baskets, toys, refuse totes, lawn furniture, flower pots, laundry baskets, and other large plastic items. <i>Does not include electronic toys.</i>
12A	<b>Retail Plastic Bags</b>	Grocery bags, retail checkout bags, and other bags associated with the retail service industry.
12B	<b>Other Non-rigid Plastic Film</b>	Garbage bags, bread bags, zipper-lock bags, plastic sheeting, saran wrap, visqueen, etc.
13A	<b>Expanded Polystyrene Foam (EPS) (Food Service)</b>	Disposable coffee cups, to-go boxes, plates and other items associated with food service,
13B	<b>Expanded Polystyrene Foam (EPS) (Packaging)</b>	Disposable packaging materials, which are typically white and are made of expanded polystyrene beads.
14	<b>All Other Plastics</b>	Any plastic materials not categorized above, such as deodorant cases, toothpaste tubes, tooth brushes, broom heads, etc.
15	<b>Tin/Steel Cans</b>	Tin-plated steel cans, usually food containers, and aerosol cans.
16	<b>White Goods</b>	Household appliances such as refrigerators, stoves, and salvageable items such as machinery.

**ATTACHMENT A – Material Category Descriptions (continued)**

#	Material Categories	Description of Categories
17	<b>Other Ferrous</b>	Steel, clothes hangers, sheet metal products, pipes, miscellaneous metal scraps, and other magnetic metal items.
18	<b>Aluminum Cans</b>	Aluminum soft drink, beer, and some food cans.
19	<b>Other Non-Ferrous</b>	Scrap aluminum, aluminum foil, and catering trays, and other non-magnetic metal, copper wiring and tubing, and brass fixtures.
20	<b>Glass Containers</b>	Clear, Brown, and Green glass bottles and containers.
21	<b>Other Glass</b>	Window panes, mirrors, ceramics, and drinking glasses.
22	<b>Textiles</b>	Clothing apparel, rags, leather, blankets, curtains, shoes, wallets, purses, belts, and scrap leather.
23	<b>Special Wastes</b>	Cleaners, oil, pool chemicals, fluorescent lights, medical waste, solvents, etc., that are considered household hazardous waste.
24	<b>Electronics (E-waste)</b>	Electronic devices such as televisions, computers, cell phones, cordless telephones, PDA, handheld devices, rechargeable batteries, etc.
25	<b>Household Batteries</b>	Household batteries including AA, AAA, C, D, 9-volt, and button types.
26	<b>Clean Wood Waste</b>	Untreated and unpainted lumber, pallets and dimensional lumber. Also includes untreated/unpainted wood furniture including chairs, cabinets, dressers, etc.
27	<b>Treated Wood Waste</b>	Treated and painted lumber, pallets, and dimensional lumber. Also includes treated/painted wood furniture including chairs, cabinets, dressers, etc.
28	<b>C&amp;D Debris</b>	Construction and demolition debris that includes concrete, carpet, drywall, insulation, and roofing materials.
29	<b>Tires and Rubber</b>	Small and large tires and other items made of rubber.
30	<b>Yard Waste</b>	Shrub and brush prunings, household bedding plants, weeds, leaves, grass clippings, and other landscaping and gardening wastes.
31	<b>Food Waste</b>	Meat and vegetable waste (includes coffee grinds and tea bags).
32	<b>All Other Garbage</b>	All other wastes not included in the above categories, including diapers and products that are composite of materials such as frozen juice cans, binders, Pringle’s can, chip bags, etc.
33	<b>Liquids</b>	All liquids found in containers will be emptied here.
34	<b>Grit</b>	Indistinguishable items less than 1-inch in diameter.

**ATTACHMENT B –Facilities Management– Individual Sample Results**

Hauler/Location		Facilities #1	Facilities #2	Facilities #3	Facilities #4	Facilities #5	Weighted Average
	Material Categories sample #	1	2	3	4	5	
1	Newspaper	0.00%	1.42%	1.15%	0.41%	0.70%	0.74%
2	Corrugated Containers	2.86%	7.10%	1.51%	10.20%	6.04%	5.62%
3	Office Paper	4.03%	3.17%	0.73%	5.35%	3.00%	3.26%
4	Other Recyclable Paper	9.86%	15.53%	10.65%	26.79%	12.09%	15.27%
5	Low Grade Paper	12.89%	25.43%	8.21%	20.21%	19.45%	17.21%
6	Aseptic Containers	0.00%	0.00%	0.36%	0.00%	0.40%	0.15%
7	PET Bottles	4.76%	0.80%	8.52%	0.00%	6.27%	4.01%
8	HDPE Bottles	1.57%	1.11%	0.95%	0.00%	1.54%	1.00%
9	Other Non-Bottle Plastics #1 and #2	1.00%	0.47%	0.58%	0.00%	2.18%	0.81%
10	Other Plastic Containers (#3-#7)	6.87%	3.17%	1.75%	1.03%	2.60%	2.98%
11	Bulky Rigid Plastics	0.00%	0.00%	1.62%	0.00%	0.70%	0.47%
12A	Retail Bags	0.65%	0.95%	0.73%	0.58%	0.75%	0.73%
12B	Non-Rigid Plastic Film	2.17%	5.23%	2.99%	1.97%	8.02%	4.00%
13A	Styrofoam Food Service	0.72%	1.11%	0.85%	0.46%	1.56%	0.93%
13B	Styrofoam Packaging	0.00%	0.00%	0.95%	4.65%	0.26%	1.27%
14	All Other Plastics	1.14%	1.54%	0.55%	0.99%	1.25%	1.08%
15	Tin/Steel Cans	0.54%	1.54%	1.40%	0.83%	0.70%	1.01%
16	White Goods/Small Appliances	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
17	Other Ferrous	7.75%	0.00%	23.55%	0.00%	0.00%	6.39%
18	Aluminum Cans	4.36%	1.11%	0.69%	0.53%	1.25%	1.53%
19	Other Non-Ferrous	0.21%	0.00%	0.73%	0.00%	0.31%	0.25%
20	Glass Containers	8.14%	1.34%	1.62%	0.00%	3.10%	2.70%
21	Other Glass	0.00%	0.00%	0.47%	0.00%	0.00%	0.10%
22	Textiles	0.65%	0.00%	2.29%	16.35%	0.00%	4.19%
23	Special Wastes	7.62%	0.00%	0.00%	0.00%	0.00%	1.42%
24	Electronics	0.00%	0.00%	0.00%	0.00%	3.00%	0.56%
25	Household Batteries	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
26	Clean Wood Waste	0.00%	0.00%	7.54%	0.00%	0.00%	1.58%
27	Treated Wood Waste	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
28	C&D Debris	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
29	Tires and Rubber	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
30	Yard Waste	0.00%	0.93%	0.00%	0.00%	0.00%	0.18%
31	Food Waste	12.15%	18.08%	14.23%	7.03%	16.08%	13.37%
32	All Other Garbage	10.05%	5.97%	3.91%	1.19%	5.67%	5.19%
33	Liquids	0.00%	3.98%	1.51%	1.44%	3.08%	1.99%
34	Grit	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	<b>TOTALS</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

**ATTACHMENT C –Housing– Individual Sample Results**

Hauler/Location		Housing #1	Housing #2	Housing #3	Housing #4	Housing #5	Weighted Average
	Material Categories sample #	6	7	11	12	13	
1	Newspaper	0.96%	1.16%	0.43%	0.28%	1.02%	0.77%
2	Corrugated Containers	5.60%	10.07%	1.46%	40.45%	26.83%	17.17%
3	Office Paper	4.64%	4.24%	7.43%	5.49%	2.62%	4.87%
4	Other Recyclable Paper	24.95%	7.42%	9.61%	4.22%	6.06%	10.46%
5	Low Grade Paper	11.51%	11.86%	12.30%	3.81%	10.22%	9.90%
6	Aseptic Containers	0.38%	0.26%	0.46%	0.37%	0.87%	0.48%
7	PET Bottles	5.38%	3.08%	5.38%	2.83%	2.68%	3.87%
8	HDPE Bottles	0.83%	0.36%	4.11%	0.54%	3.25%	1.85%
9	Other Non-Bottle Plastics #1 and #2	2.39%	0.58%	1.16%	0.48%	1.00%	1.13%
10	Other Plastic Containers (#3-#7)	2.76%	1.69%	1.86%	1.96%	1.94%	2.05%
11	Bulky Rigid Plastics	1.05%	3.08%	1.66%	1.07%	2.72%	1.90%
12A	Retail Bags	2.80%	0.74%	0.65%	0.48%	0.58%	1.05%
12B	Non-Rigid Plastic Film	2.15%	4.05%	5.08%	2.53%	2.93%	3.32%
13A	Styrofoam Food Service	0.96%	1.64%	0.64%	0.54%	0.67%	0.87%
13B	Styrofoam Packaging	0.48%	0.94%	0.17%	0.39%	0.00%	0.38%
14	All Other Plastics	1.97%	1.69%	1.26%	0.96%	0.50%	1.26%
15	Tin/Steel Cans	0.74%	0.87%	1.39%	0.48%	1.75%	1.06%
16	White Goods/Small Appliances	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
17	Other Ferrous	0.38%	1.06%	0.41%	4.88%	0.40%	1.43%
18	Aluminum Cans	0.53%	0.63%	0.73%	0.76%	0.40%	0.61%
19	Other Non-Ferrous	0.33%	0.26%	0.50%	0.20%	0.62%	0.39%
20	Glass Containers	2.80%	5.01%	6.62%	2.85%	2.71%	3.96%
21	Other Glass	0.37%	0.00%	0.45%	1.57%	0.87%	0.67%
22	Textiles	2.36%	2.12%	6.70%	2.35%	0.92%	2.88%
23	Special Wastes	0.00%	0.00%	0.00%	0.00%	9.88%	2.10%
24	Electronics	0.48%	0.00%	0.65%	0.48%	0.10%	0.35%
25	Household Batteries	0.37%	0.40%	0.13%	0.10%	0.00%	0.20%
26	Clean Wood Waste	0.48%	0.00%	0.00%	0.24%	1.94%	0.56%
27	Treated Wood Waste	0.00%	0.00%	0.00%	0.63%	0.00%	0.13%
28	C&D Debris	0.00%	0.00%	0.00%	0.76%	0.00%	0.16%
29	Tires and Rubber	0.00%	0.41%	0.00%	0.00%	0.27%	0.13%
30	Yard Waste	0.00%	0.00%	0.00%	0.00%	0.67%	0.14%
31	Food Waste	15.24%	27.85%	19.77%	9.69%	10.26%	16.27%
32	All Other Garbage	4.68%	4.63%	3.25%	3.74%	3.70%	3.99%
33	Liquids	1.05%	0.82%	5.74%	1.52%	1.02%	2.03%
34	Grit	1.36%	3.08%	0.00%	3.34%	0.60%	1.65%
	<b>TOTALS</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

**ATTACHMENT D –Arkansas Union– Individual Sample Results**

Hauler/Location		Union #1	Union #2	Union #3	Union #4	Union #5	Weighted Average
Material Categories	sample #	16	17	18	19	20	
1	Newspaper	0.71%	1.25%	1.01%	1.03%	5.49%	1.90%
2	Corrugated Containers	3.00%	6.18%	4.30%	3.16%	1.95%	3.70%
3	Office Paper	1.43%	1.66%	2.17%	1.69%	4.42%	2.28%
4	Other Recyclable Paper	6.90%	6.70%	4.31%	6.27%	9.37%	6.72%
5	Low Grade Paper	41.68%	22.09%	23.11%	29.48%	23.95%	28.22%
6	Aseptic Containers	0.00%	0.44%	0.40%	0.24%	0.00%	0.21%
7	PET Bottles	4.72%	2.05%	1.32%	1.16%	1.65%	2.21%
8	HDPE Bottles	1.63%	2.59%	0.46%	1.15%	2.48%	1.66%
9	Other Non-Bottle Plastics #1 and #2	3.45%	1.95%	1.92%	4.18%	0.94%	2.49%
10	Other Plastic Containers (#3-#7)	1.16%	1.66%	1.75%	1.69%	0.92%	1.43%
11	Bulky Rigid Plastics	0.00%	1.52%	0.59%	1.08%	1.71%	0.97%
12A	Retail Bags	0.00%	0.32%	0.31%	0.37%	1.53%	0.51%
12B	Non-Rigid Plastic Film	7.45%	10.00%	8.63%	7.83%	8.48%	8.46%
13A	Styrofoam Food Service	2.48%	1.17%	1.13%	3.12%	2.76%	2.14%
13B	Styrofoam Packaging	0.00%	0.00%	0.00%	0.23%	0.77%	0.20%
14	All Other Plastics	2.23%	1.12%	1.84%	3.21%	3.81%	2.45%
15	Tin/Steel Cans	0.64%	1.03%	0.55%	1.84%	1.30%	1.06%
16	White Goods/Small Appliances	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
17	Other Ferrous	0.00%	0.32%	0.00%	0.98%	0.00%	0.25%
18	Aluminum Cans	0.00%	0.68%	0.47%	0.34%	0.30%	0.35%
19	Other Non-Ferrous	0.00%	0.32%	0.70%	0.54%	0.00%	0.31%
20	Glass Containers	0.00%	1.78%	1.75%	1.35%	0.00%	0.96%
21	Other Glass	0.00%	0.00%	0.00%	0.10%	0.00%	0.02%
22	Textiles	0.00%	2.05%	2.13%	1.74%	5.38%	2.25%
23	Special Wastes	0.00%	0.00%	0.00%	0.00%	0.31%	0.06%
24	Electronics	0.00%	0.00%	0.09%	0.00%	0.00%	0.02%
25	Household Batteries	0.00%	0.20%	0.00%	0.00%	0.00%	0.04%
26	Clean Wood Waste	0.00%	0.32%	0.55%	0.00%	0.42%	0.26%
27	Treated Wood Waste	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
28	C&D Debris	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
29	Tires and Rubber	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
30	Yard Waste	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
31	Food Waste	14.33%	27.86%	36.10%	21.25%	16.27%	23.03%
32	All Other Garbage	5.27%	2.88%	3.14%	3.04%	1.71%	3.23%
33	Liquids	2.91%	1.86%	1.27%	1.20%	4.07%	2.28%
34	Grit	0.00%	0.00%	0.00%	1.74%	0.00%	0.34%
	<b>TOTALS</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

**ATTACHMENT E –Athletics– Individual Sample Results**

Hauler/Location		Athletics #1	Athletics #2	Athletics #3	Athletics #4	Athletics #5	Weighted Average
	Material Categories sample #	8	9	10	14	15	
1	Newspaper	0.00%	1.62%	0.60%	1.14%	2.28%	1.12%
2	Corrugated Containers	2.83%	1.28%	5.01%	10.04%	7.43%	5.27%
3	Office Paper	1.92%	1.53%	6.33%	9.35%	16.95%	7.18%
4	Other Recyclable Paper	5.57%	10.37%	10.96%	8.60%	7.41%	8.54%
5	Low Grade Paper	24.12%	27.96%	23.84%	14.54%	6.66%	19.46%
6	Aseptic Containers	0.00%	0.00%	0.50%	0.42%	0.29%	0.24%
7	PET Bottles	0.17%	3.04%	5.74%	5.86%	2.98%	3.50%
8	HDPE Bottles	0.48%	1.32%	0.36%	2.00%	2.95%	1.41%
9	Other Non-Bottle Plastics #1 and #2	2.79%	1.53%	0.53%	0.74%	0.00%	1.14%
10	Other Plastic Containers (#3-#7)	2.66%	3.84%	2.73%	2.49%	1.07%	2.55%
11	Bulky Rigid Plastics	0.00%	0.00%	3.79%	2.17%	0.00%	1.16%
12A	Retail Bags	0.00%	0.00%	0.65%	0.46%	0.77%	0.37%
12B	Non-Rigid Plastic Film	6.53%	7.02%	7.67%	5.98%	6.48%	6.74%
13A	Styrofoam Food Service	1.57%	1.21%	2.00%	1.24%	0.95%	1.39%
13B	Styrofoam Packaging	0.00%	0.00%	0.00%	3.12%	1.49%	0.90%
14	All Other Plastics	1.92%	1.29%	0.72%	0.94%	1.68%	1.32%
15	Tin/Steel Cans	0.00%	0.82%	0.72%	0.69%	1.98%	0.84%
16	White Goods/Small Appliances	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
17	Other Ferrous	0.00%	0.00%	0.00%	0.00%	1.89%	0.38%
18	Aluminum Cans	6.53%	2.32%	0.76%	0.42%	0.57%	2.18%
19	Other Non-Ferrous	1.04%	0.72%	0.76%	0.43%	0.50%	0.69%
20	Glass Containers	3.83%	1.74%	3.94%	0.00%	0.84%	2.10%
21	Other Glass	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
22	Textiles	1.94%	5.68%	1.00%	3.05%	0.50%	2.42%
23	Special Wastes	0.00%	0.91%	0.00%	0.00%	0.00%	0.18%
24	Electronics	0.20%	0.00%	1.39%	0.46%	0.00%	0.40%
25	Household Batteries	0.24%	0.00%	0.00%	0.00%	0.00%	0.05%
26	Clean Wood Waste	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
27	Treated Wood Waste	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
28	C&D Debris	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
29	Tires and Rubber	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
30	Yard Waste	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
31	Food Waste	26.65%	19.98%	13.20%	16.23%	28.01%	20.95%
32	All Other Garbage	4.44%	1.53%	2.45%	3.19%	4.98%	3.34%
33	Liquids	4.57%	4.31%	3.32%	6.44%	1.34%	3.98%
34	Grit	0.00%	0.00%	1.02%	0.00%	0.00%	0.20%
	<b>TOTALS</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>