Municipal Solid Waste Characterization Study for Indiana

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EXECUTIVE SUMMARY

The Indiana Recycling Market Development Board commissioned a statewide municipal solid waste (MSW) characterization study. This is the first field study to characterize the composition of MSW going into Indiana landfills. The objectives included: (1) develop a reliable statewide characterization of MSW received for disposal at Indiana MSW facilities; (2) compare Indiana findings to other state and national results; and (3) estimate the types and quantities of potentially recoverable and compostable materials in the Indiana MSW stream. The study also was structured to provide an educational opportunity for Purdue students in solid waste management and performing data collection and research.

Field sorts were conducted at a number of Indiana MSW facilities during parts of three seasons of 2008 and 2009. When selecting the participating facilities, attention was given to both geographic and demographic diversity and disposal facility and size. The selected facilities represented urban, suburban and rural service areas. The sort data used for analysis came from the Newton County Landfill (urban), Bartholomew County Landfill (suburban), the Daviess County Landfill (rural) and the Adams County Transfer Station (rural). For each site, a minimum of 20 samples from Indiana origins, each ranging in weight from 210 to 250 pounds, was sorted. It is assumed that the majority of samples collected was from residential sectors; however, it is acknowledged that some commercial and institutional waste could have been included. To provide the samples, a random grab sampling technique proved to be the most efficient method for this project. The waste materials were classified into 49 different categories. These fell into the following 16 major categories: paper, plastic, metal, glass, yard waste, food waste, wood, demolition and construction debris, durables, textiles and leather, diapers, rubber, household hazardous materials, sharps, fines and other.

The overall MSW composition from Indiana origins for disposal at Indiana landfills and incinerator is estimated as follows, to the nearest percent: Paper – 29; Plastic – 17;

Metal – 6; Glass – 3; Yard Waste – 7; Food Waste – 10; Wood – 7; Demolition and Construction Debris – 5; Durables – 4; Textiles & Leather – 6; Diapers – 3; Rubbers – 1; Household Hazardous Materials – 1; Sharps – 0; Fines – 2; Other – 1. This average composition was then compared to the results from other state sorts and to the national average. States used for comparison were: IL, IA, PA, WI, MN, CA, GA and DE. A comparison was made for the following components: paper, plastic, metal, glass, wood, organics, inorganics, and special waste (e.g, bulky items and tires).

The analysis showed that Indiana has the highest percentage of plastic (16.7) compared to the average of 13.3. It has the lowest percentages of special waste (1.7) compared to the average of 2.6; and inorganics (8.9) compared to the average of 11.5. Indiana is in the middle range of all nine states for paper, metal, glass, wood and organics. Using the national average composition provided by the EPA, Indiana has a higher percentage for paper and paperboard (29.1 vs. 20.7); and miscellaneous inorganic wastes (15.4 vs. 2.3). The percentages for Indiana are lower for glass (2.9 vs. 5.6); ferrous metal (4.7 vs.6.2); aluminum (0.8 vs. 1.6); total metal (6.0 vs. 8.1); textiles (5.7 vs. 6.3); wood (6.8 vs. 8.9); and food scraps (9.9 vs. 18.6).

The greatest opportunities for source reduction and recycling in the MSW stream are OCC (634,150 tons, 10.6%), mixed recyclable paper (73,954 tons, 1.2%), and film/wrap/bags (306,032 tons, 5.1%). Food waste (591,557 tons, 9.9%), and compostable paper (269,540 tons, 4.5%) also have source reduction and recycling opportunities through composting.

In conclusion, the first study of MSW characterization for Indiana was successfully completed. The methodology for sampling and data analysis was similar to other state waste characterization studies and gave comparable results.

The following is recommended: (1) To have a more reliable MSW composition determination, more sites should be sampled. (2) To facilitate more sampling sites, better cooperation of the landfills, both public and private, in the state is necessary. (3)

To further disseminate the results, add the information found in this study to the IN map project.

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We were fortunate that the state saw fit to hire a university to perform the study. This enabled the students to gain firsthand knowledge and experiences about the municipal solid waste issue facing Indiana. This knowledge and experience have been brought back to the school (Purdue University Calumet) in a multitude of ways, including the first ever solid waste sort on the campus at the end of 2010, to help evaluate the new recycling program.

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GLOSSARY

- **90% Confidence Interval** – represents that there is a 90% level of confidence that the true mean for the overall population falls within the upper and lower bounds of the confidence interval (R.W. Beck, Inc., 2006).

- **Confidence Interval** – the upper and lower limits of the "actual" mean for the overall population (R.W. Beck, Inc., 2006).

- **Indiana Origin** – refers to Indiana waste that comes solely from Indiana. The waste from trucks specifically designated by the landfill/transfer station operators as carrying and unloading only waste loaded from Indiana pickup sites. Waste from Indiana Origin does not include imported waste from other states.

- **Mean** – the mathematical average or average percent of material composing the MSW stream by weight (R.W. Beck, Inc., 2006).

- **Municipal Solid Waste (MSW)** – garbage, refuse and other solid waste from commercial, industrial and community activities that the generator of the waste aggregates for collection. MSW does not include auto hulks, street sweepings, ash, dedicated construction debris, mining waste, sludges, agricultural wastes, and other materials collected, processed and disposed of as separate waste streams (R.W. Beck, Inc., 2006).

ABSTRACT

The Indiana Recycling Market Development Board, commissioned the completion of a statewide municipal solid waste (MSW) characterization study for Indiana. MSW facilities were sampled mainly during Spring and Fall seasons. The study was divided into seven steps: literature review, model development, characterization for sites sampled, characterization for non-participating waste facilities, potential for increased recycling, documentation and presentation. The following results were obtained: MSW composition for four participating facilities, MSW composition for non-participating facilities, overall MSW composition for different sector origins, and overall composition of MSW disposed at Indiana waste facilities as received from in-state origins and from in-state/import origins. A comparison between Indiana, other states and national results was made. Based on the composition results and comparison, opportunity for source reduction and recycling was found, especially for paper and plastic.

CHAPTER 1. INTRODUCTION

1.1. Background

This chapter describes the relevant background for the study, characterizes the objectives of the Municipal Solid Waste Characterization Study for Indiana, and identifies the participating municipal solid waste facilities in Indiana. The Indiana Recycling Market Development Board commissioned the completion of a statewide municipal solid waste characterization study (Indiana Department of Environmental Management, 2006). This is the first field study to characterize the composition of MSW going into Indiana landfills and included waste sorts over three seasons at five Indiana MSW facilities.

1.2. Study Objectives

The objectives of the study were to:

1. Develop a reliable statewide characterization of Municipal Solid Waste (MSW) received for disposal at Indiana MSW facilities.
2. Compare Indiana results to other state and national results.
3. Estimate the types and quantities of potentially recoverable and compostable materials in the Indiana MSW stream.

1.3. Participating Facilities

To accomplish the objectives described above, during parts of three seasons, field sorts were conducted at five Indiana MSW facilities. When selecting the participating facility, attention was given to both geographic and demographic diversity, and disposal facility and size. The selected MSW facilities represented urban, suburban and rural service areas.

The five MSW facilities participating in the study included:

- Bartholomew County Landfill
- Adams County Transfer Station
- Newton County Landfill
- Daviess County Landfill
- Pulaski County Transfer Station

Unfortunately the samples from Pulaski County Transfer Station were not representative enough, and sorts from that transfer station were not incorporated into this study, as explained in Chapter 3. Table 1-1 lists the facilities that were considered in the study and general site characteristics (United States Census Bureau), (United States Environmental Protection Agency, 2008).

Table 1-1:Participating Facilities

Waste Facility	Region	Population (county)	Waste Disposal(ton)
Bartholomew County Landfill	Central Region	76,063	81,402
Adams County Transfer Station	East	34,256	9,579
Newton County Landfill	Northwest	13,736	2,460,650
Daviess County Landfill	South	30,620	22,692

CHAPTER 2. STUDY ELEMENTS

2.1. Introduction

The study was divided into seven main steps:

1. Literature review
2. Model development
3. Characterization for sites sampled
4. Characterization for non-participating waste facilities
5. Potential for increased recycling
6. Documentation
7. Presentation

Each step had specific tasks.

2.2. Literature Review

a. Do a literature search on MSW characterization and modeling studies for such a characterization.
b. Critically evaluate collected literature.

The starting point for the review was the Iowa Statewide Waste Characterization Study (R.W. Beck, Inc., 2006), Iowa Solid Waste Characterization (R.W. Beck, Inc., 1998), A Collection of Solid Waste Resources CD (United States Environmental Protection Agency, 2004), California Statewide Waste Characterization Study (Cascadia Consulting Group, Inc., 2004), Pennsylvania Statewide Waste Composition Study, Final Report (R.W. Beck, Inc., 2003), Wisconsin Statewide Waste Characterization Study (Cascadia Consulting Group, Inc., 2003), Minnesota Statewide MSW Composition Study (Engineering Solutions and Design, Inc., 2004), the Georgia Statewide Waste Characterization Study (R.W. Beck, Inc., 2005), and Illinois Commodity/Waste

Generation and Characterization Study (Camp Dresser & McKee, Inc., 2009). The study scope, size and time of sampling for individual states were reviewed and compared. Table 2-1 summarizes the time and number of sampling for different states.

Table 2-1: Comparison of MSW Studies Conducted by Various States

State	IN	IL	IA	IA	PA	WI	MN	CA	GA
Year	12	09	98	06	03	03	00	04	05
#Season	1	1	2	1	4	1	1	4	4
Season	Sm 08 - Sm 09	F 08	F 97 Sp 98	F 05	Sm 01 F 01 W 02 Sp 02	F 02	F 09	Sm 03 F 03 W 03 Sp 04	F 03 - Sm 04
# Sites	4+	19	5	6	13	14	8	22	13
% Sites	13	39	7	8	28	39	21	8	21

It can be seen that the studies conducted previously around the United States varied widely in scope. Some states (PA03, CA04 and GA05) conducted sorts over all four seasons. One (IA 98) did the sort over two seasons. The rest (IL09, IA 06, WI03 and MN00) only sorted during one season. Some states (IL09, PA03, WI03, MN00 and GA05) were able to sample more than twenty percent of all facilities in the state. From this survey, and the fact that the two Iowa studies were deemed the most appropriate by IDEM to emulate, the original intent was to sample six sites over two seasons; this turned out not to be possible. Due to a number of limitations, only one sort per site was conducted. These limitations included: difficulty of getting landfills to participate in the study, schedules of the students which restricted their availability, and the cost of sending teams into the field.

2.3. Model Development

a. Develop a modeling strategy for conducting a statewide MSW characterization study based on literature review and discussions with field managers and the research group.
b. Decide locations to sample, number of samples to be analyzed, and the time of sampling. In order to provide the most accurate information to the state, urban,

suburban and rural sites were selected. A total of four MSW facilities were visited including one urban site, two suburban sites, and one rural site. For further representative analysis, a geographical diversity of locations was selected so that sites ranging from the northwest, eastern, central and southern portions of the state were included in the study. For each site, a minimum of 20 samples was taken. The Summer season was a good time to do most of the sorts because of the availability of students.

2.4. Characterization for Sites Sampled

The methodology used by R.W. Beck Inc. for both Iowa MSW Characterization Studies was followed at each site sampled (R.W. Beck, Inc., 1998), (R.W. Beck, Inc., 2006). The procedure includes the following steps:

1. Determine and confirm the material categories and definitions
2. Conduct pre-sort assessment
3. Define waste sort protocol
4. Conduct waste sorts
5. Compile and review collected data
6. Complete statistical modeling

2.4.1. Determine and Confirm the Material Categories and Definitions

The material categories were provided by IDEM in the initial call for proposals and agreed to by Purdue University Calumet. Definitions were similar to those found in the Iowa and Pennsylvania studies (R.W. Beck, Inc., 1998), (R.W. Beck, Inc., 2006), (R.W. Beck, Inc., 2003). A set of 49 categories was selected for this study. The definitions of each of these materials are included in Appendix A for reference. Table 2-2 lists the sort categories for the Indiana MSW characterization study.

Table 2-2: Sort Categories for the Indiana MSW Characterization Study	
CATEGORIES	SUBCATEGORIES
PAPER	OCC and Kraft bags
	Newspaper
	Magazines
	High Grade/Office
	Mixed Recyclable Paper (including Books, Boxboard)
	Compostable Paper
	Other Non-recyclable, Non-compostable Paper
PLASTIC	#1 PET Non-Deposit Beverage Containers
	#1 PET Deposit Beverage Containers
	#1 PET All Other Containers
	#2 HDPE Containers
	# 6 Styrofoam
	All Other Numbered Containers (#3,4,5,6,7)
	Other Plastic – NOT Numbered
	Film/Wrap/Bags
METAL	Aluminum Non-Deposit Beverage Containers
	Aluminum Deposit Beverage Containers
	Aluminum All Other Containers
	Other Non-Ferrous Scrap
	Ferrous Food & Beverage Containers
	Other Ferrous Scrap
GLASS	Clear
	Green
	Blue
	Brown
YARD Waste	
FOOD WASTE	
WOOD	Non-Treated Wood

Table 2-2: Sort Categories for the Indiana MSW Characterization Study	
CATEGORIES	SUBCATEGORIES
	Treated Wood
DEMOLITION/RENOVATION/ CONSTRUCTION DEBRIS (excluding Wood)	
DURABLES	All Electrical & Household Appliances
	Central Processing Units/Peripherals
	Computer Monitors/TV's
	Cell Phones
	Other (Furniture & Furnishings)
TEXTILES & LEATHER	
DIAPERS	
RUBBER	
HOUSEHOLD HAZARDOUS MATERIALS (HHMs)	Oil Filters
	Paints & Solvents
	Batteries (Lead-Acid)
	Batteries (Other)
	Mercury Containing Products
	Other (HHM Containers with Product Inside)
SHARPS	
FINES/SUPERMIX	
OTHER-SPECIFY	

2.4.2. Conduct Pre-sort Assessment

Prior to initiating the sorting events, it was critical to conduct site assessments at each of the participating facilities. A site visit was made to each facility prior to the actual sampling. The purpose of the site assessments was two-fold — to promote facility staff support and cooperation for the sorting events and gather data and site information needed to develop a sampling and sorting plan for each site. During these visits, discussions took place with the operators of the facilities and the standard operating

procedure of each facility was obtained. A questionnaire was prepared for the landfill operators (Appendix B). Such details like what equipment will be necessary to perform the sampling, how the sampling is to be done, the date of sampling, etc., were decided. In addition, a pre-sort workshop for the research group to explain the sorting methodology and procedure was conducted. Safety was of primary importance. Each group member was immunized against Hepatitis and Tetanus before any sorting was begun.

2.4.3. Define Waste Sort Protocol

In conjunction with each facility, a sorting protocol was established. The protocol included identifying the Indiana origin of a sample. Origins would be urban, suburban, rural, or mixed (urban/suburban or suburban/rural). The protocol also included how the samples were to be selected and sorted. Safety regulations and issues were considered and guidelines for the people doing the sampling were written.

2.4.4. Conduct Waste Sorts

Sorting events were conducted at each of the participating facilities from late Summer 2008 through Summer 2009. The first facility visited was Bartholomew County Landfill. It took almost four months to complete the sorting because the research group was not familiar with the sorting procedure and weekends were the only time available for students, since school started in late August. For other sites, two weeks was the general time for sorting. Table 2-3 lists the major participating facilities, locations, seasons and dates for each sorting event. Figure 2-1 shows the location of the four participating facilities.

Table 2-3: Sorting Events for Participating Facilities			
Participating Facility	**Location**	**Season**	**Date**
Bartholomew County Landfill	Columbus	Sum, F 08	08/18-11/12
Adams County Transfer Station	Decatur	Sp 09	05/28-06/11
Newton County Landfill	Brook	Sp, Sum 09	06/17-07/01
Daviess County Landfill	Montgomery	Sum 09	07/17-08/15

A total of 81 samples representing more than 18,382 pounds of municipal solid waste were sorted for the study.

Figure 2-1 *Location of Participating Facilities*

2.4.4.1. Sorting Methodology and Procedure

Sample attainment in the field research included section, grab/ random sampling methods. In section sampling waste from a garbage truck was positioned in an elongated mound (Figure 2-2). The waste was visually divided into ten sections (Figure 2-3); a predetermined section, which was chosen randomly, was then taken from the mound by a front end loader (Figure 2-4). The sample was then weighed from the chosen section. In grab/random sampling waste was taken at random from a garbage truck using a front end loader (Figure 2-5). From that grab sample, manual random sampling was conducted to obtain a smaller sample size for sorting into the various components. Two hundred or more pounds were weighed using the random sampling technique.

The grab/random sampling technique was the method used for this research. Random grab sampling proved to be more efficient as compared to section sampling. The waste grab sample from the garbage truck was poured on the ground by a front loader into a large pile near the sorting tables. Garbage bags and loose garbage were randomly picked out from throughout the pile and weighed (Figure 2-6). Garbage from the pile was placed into several extra big plastic totes and weighed on the scale. The weight of the tote was zeroed and the weight of the garbage alone was recorded.

Approximately 210-250 pounds were obtained randomly from the garbage provided for each sample prior to sorting. This waste was placed on an additional tarp to be sorted through. After the sample was weighed the categorizing process began for that sample. Forty-nine plastic totes of varying size were used for separating the waste into each appropriate category (Figure 2-7). The plastic totes surrounded the sorting table that consisted of two long plastic fold out tables with four custom-made sorting grids (Figure 2-8). The grids sat on top of four polyethylene sheets covering the table's surface. The grids were made of chicken wire held tightly between split wood 2x4's (Figure 2-9). The grids were secured together with four bar clamps and masking tape along meeting edges. The screened grids allowed the fines from the garbage to fall through onto the table. The fines were collected at the end of sorting with a dust pan brush and a

squeegee off the polyethylene sheet into the fines category plastic tote. The garbage bags from the two hundred pound sample were picked up from the pile on the tarp one by one or poured from the extra totes used for weighing out the waste onto the grids on top of the sorting table. The bags were cut open with box cutters and the contents spread over the grids in order to be sorted. In the beginning of the research, E-Z grabbers were used to pick up various pieces of garbage from the table and then drop them into the appropriate plastic tote. However, the E-Z grabbers broke and were found to slow the sorting process. In order to be more efficient in categorizing, all researchers began using their hands to sort and pick through the waste (Figure 2-10). Everyone wore double layered leather gloves over a pair of nitrile gloves at all times on the research site and during sorting. All participants also wore steel toe working boots at all times for safety and ease of walking around on the work site. After the sample was completely sorted each plastic tote was weighed on the pre-leveled scale and weights recorded on the data sheets (Figure 2-11). After the plastic totes were weighed the contents were emptied into a pile and removed by landfill staff for final deposition. New waste was obtained after sorting of the previous sample was completed.

In addition, some general rules were followed during sorting:

- No working during the rain – cover tarp and weights
- New garbage, every sample
- Tare weight all buckets every morning
- Level scale everyday
- Thoroughly clean all working materials for each location
- Safety-wear: gloves, suits, masks, boots

2.4.4.2. Sorting Event at each Facility

This research project included five sampling sites; in order of completion: Bartholomew County Landfill located in Columbus, Indiana; Adams County Transfer Station located in Decatur, Indiana; Newton County Landfill located in Brook, Indiana; Daviess County Landfill located in Montgomery, Indiana; Pulaski County Transfer Station located in Winamac, Indiana (result not being used). The sampling method and process exercised at each location were in the best interest and convenience of the facility.

Data was collected at Bartholomew County Landfill August 2008 through November 2008. The sampling methods began with section sampling and then used random grab sampling at this site. The first two samples' data were collected using the section sampling method. A garbage truck dumped the waste into an elongated pile. The pile was visually divided into ten sections and one section was taken aside by a front loader. From this section a sample of over two hundred pounds was sorted. After these first two samples, random grab sampling method was followed for the remaining eighteen samples in order to be more efficient. A good amount of waste from a garbage truck was poured on the ground close to the sorting work site by a front loader. A sample of over two hundred pounds was weighed from this pile to be categorized. The sorting site was located on the landfill away from the current dumping area. Aluminum frame pop-up portable gazebos were used to block out the rain and sun.

Data was collected at Adams County Transfer Station May 2009 through June 2009. The grab sampling technique was performed for all twenty-one samples. A front loader brought waste into the sorting area and put it onto a tarp. The two hundred pound sample was picked from this pile. The area provided for sorting was an indoor facility which allowed the waste to be categorized in rain or shine weather conditions. Disposable face masks were worn a majority of the time for protection from fumes and debris. Tyvek suits were worn for additional protection and cleanliness while sorting the waste.

Data was collected at Newton County Landfill from June 2009 through July 1, 2009. The grab sampling technique was also performed for all twenty samples. A big front loader dumped the waste into a large pile just inside the fenced in work area. The two hundred pound sample was weighed out of this pile from the front loader. Reflective vests and hardhats were required while on site in addition to the gloves and boots safety gear. The sorting site was located at the very top of the landfill away from most activity and the tipping site. This work area was located in a provided fenced in area for the

protection and safety of the researchers. The aluminum gazebos were also used to provide shade from intense sunlight.

Data was collected at Daviess County Landfill from July 2009 through August 2009. The grab sampling method was used for all twenty samples. A front loader poured a pile of waste next to the sorting area and the two hundred pound sample was weighed out from this. The sorting site was located on top of the landfill near the dumping area. In order to keep a sample overnight for a morning sort, the entire new pile of waste was covered with tarps and weighed down with rocks and weights. Gazebos were used over the table to block the sun.

Data was collected at Pulaski County Transfer Station in August 2009, September 2009, and October 2009. The ten samples were completed through grab sampling technique. The two hundred pound samples came from a dumpster containing waste brought in directly by the residents. The same dumpster was used for more than one sample. Other samples came directly from what was being brought to the transfer station during the actual time of the sort. A few of the two hundred pound samples came from merely one or two households alone. The samples were not viable and not representative of typical Indiana waste samples and so were not included in the final calculations.

2.4.5. Compile and Review Collected Data

Upon completing the sampling and sorting events, the data sheets for each sample were reviewed to ensure the following:

- Individual entries were legible;
- A description of the likely origin of the waste materials was included;
- Weather conditions for each sample were recorded;
- Specific comments on the unusual aspects of the sample were legible and understandable;

- A minimum of 200 pounds as recorded on each sample sheet was sorted for each sample;
- Non- MSW loads were excluded from the analysis; and
- The facility name and sample number were included on the data sheet.

The tare weight of the individual material's container and the weight of individual material plus the tare weight were recorded on the data sheet for all materials.

2.4.6. Complete Statistical Modeling

The data obtained from sorting events were used to statistically calculate the mean and 90% confidence level for the waste composition. A statistical model has been developed in Microsoft Excel for easy accessibility and use. The model statistically manipulates the data to calculate the mean, and 90% confidence intervals for individual material categories by site and statewide results.

The mean represents the mathematical average or average percent of material composing the MSW stream by weight. The confidence interval is an expression of accuracy. It provides the upper and lower limits of the "actual" mean for all the MSW received at the participating facility based upon the sorting and sampling observations of the sampled materials. For example, the 90% confidence interval represents that there is a 90% level of confidence that the true population mean falls within the upper and lower bounds of the confidence interval. The 90% confidence interval is the generally accepted industry standard for solid waste composition studies. In general, the more samples that are sorted, the narrower the confidence interval becomes for a given level of confidence. The narrower the intervals are, the less variability in the data.

Overall, the outputs of the model provide multiple measures for evaluating the results. It is critical when comparing the MSW composition results that the confidence intervals are considered along with the mean percentages.

2.5. Characterization for Non-participating Waste Facilities

Indiana disposes MSW at thirty landfills and one incinerator plant. Three of these facilities participated in the study. The MSW composition received at the non-participating facilities needs to be estimated when determining a statewide characterization. Waste streams can vary due to local and regional economic trends, local tipping fees, urban versus rural population distribution, waste diversion program effectiveness, total and type of industrial employment, and population demographics (R.W. Beck, Inc., 2006). R.W. Beck has suggested a methodology for determining the composition from such non-participating facilities. The methodology consists of three approaches:

> "The first approach is to utilize the waste composition percentages developed in the statewide characterization and apply those percentages to the tonnages for the particular service area.
>
> The second approach is to select a service area from the waste composition study that is similar to the service area in question and average the waste composition percentages of the similar service area with the statewide results.
>
> The third approach is to select the service area that is most similar to the service area in question and to identify the specific characteristics of the service area in question that will make it dissimilar from the selected service area. Using the specific characteristics of the service area in question, the waste composition percentages would then be adjusted to reflect the specific waste characterization." (R.W. Beck, Inc., 2006)

The methodology is shown as a flow diagram in Figure 2-12.

R.W. Beck has also identified several key variables to be used to determine differences between given service areas. These key variables are: curbside recycling availability, extent of urbanization, employment to population ratio, and percent total employment by sector. The Beck methodology will be used for non-participants.

2.6. Potential for Increased Recycling

Based on the analysis of statewide MSW composition and comparison with other states, opportunities for source reduction and recycling can be found.

For the state, determine the types and quantities of present and potentially available recyclables for the state.

2.7. Documentation

A final report and a thesis are required for this study. Those reports will document all findings and will:

- Determine average compositions of MSW streams from urban, suburban, rural, urban/suburban, and suburban/rural areas.
- Determine overall composition of Indiana's MSW stream.
- Compare results with other state and national characterization studies.
- Estimate the types and quantities of potentially recoverable and compostable materials in the Indiana MSW stream.
- Present data in both tabular and graphical form for ease of interpretation.

2.8. Presentation

When possible, the results of the study will be presented, as appropriate, to local, regional, and state governmental agencies, to the facilities and organizations involved in MSW issues in Indiana, to the public in Indiana, and at conferences held regionally and nationally.

Figure 2-2 *Waste Hauler Truck Unloading*

Figure 2-3 *Waste Piles as an Elongated Mound*

Figure 2-4 *Predetermined Section taken from the Elongated Mound*

Figure 2-5 *Front End Loader Bringing Waste to the Tarp*

Figure 2-6 *Garbage Bags & Loose Garbage are Randomly Picked Out from the Pile*

Figure 2-7 *Some of Forty Nine Plastic Totes*

Figure 2-8 *Working Area*

Figure 2-9 *Custom-made Sorting Grids*

Figure 2-10 *Sorting a Grab Sample*

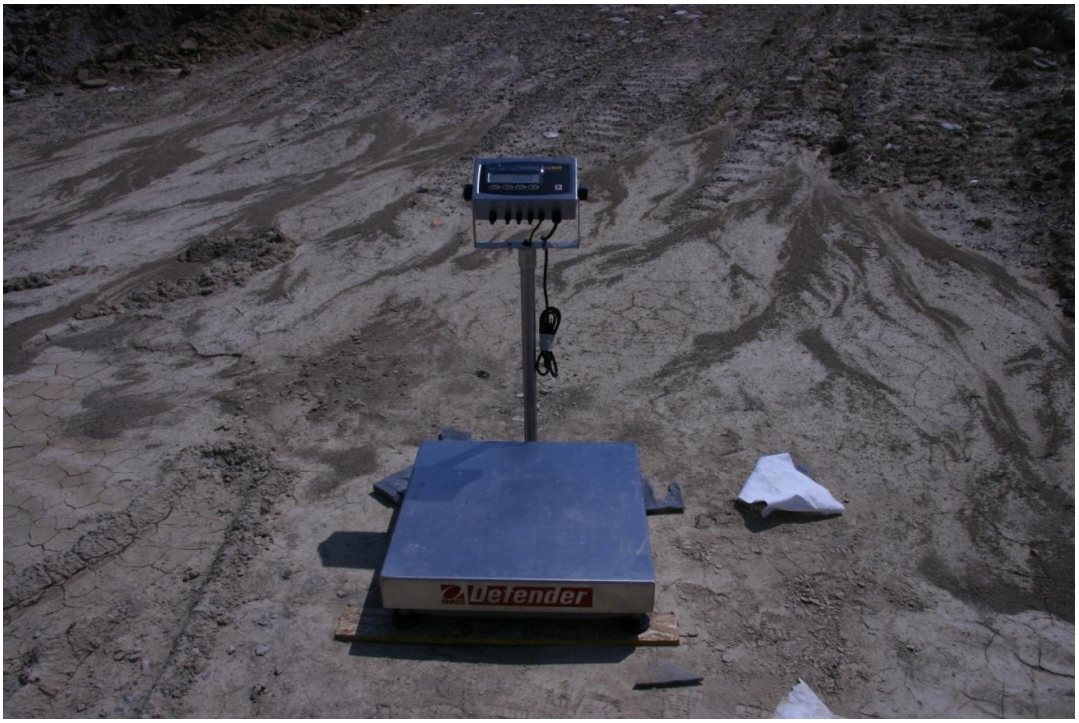


Figure 2-11 *Balance (OHAUS, 5000 Series, Xtreme W)*

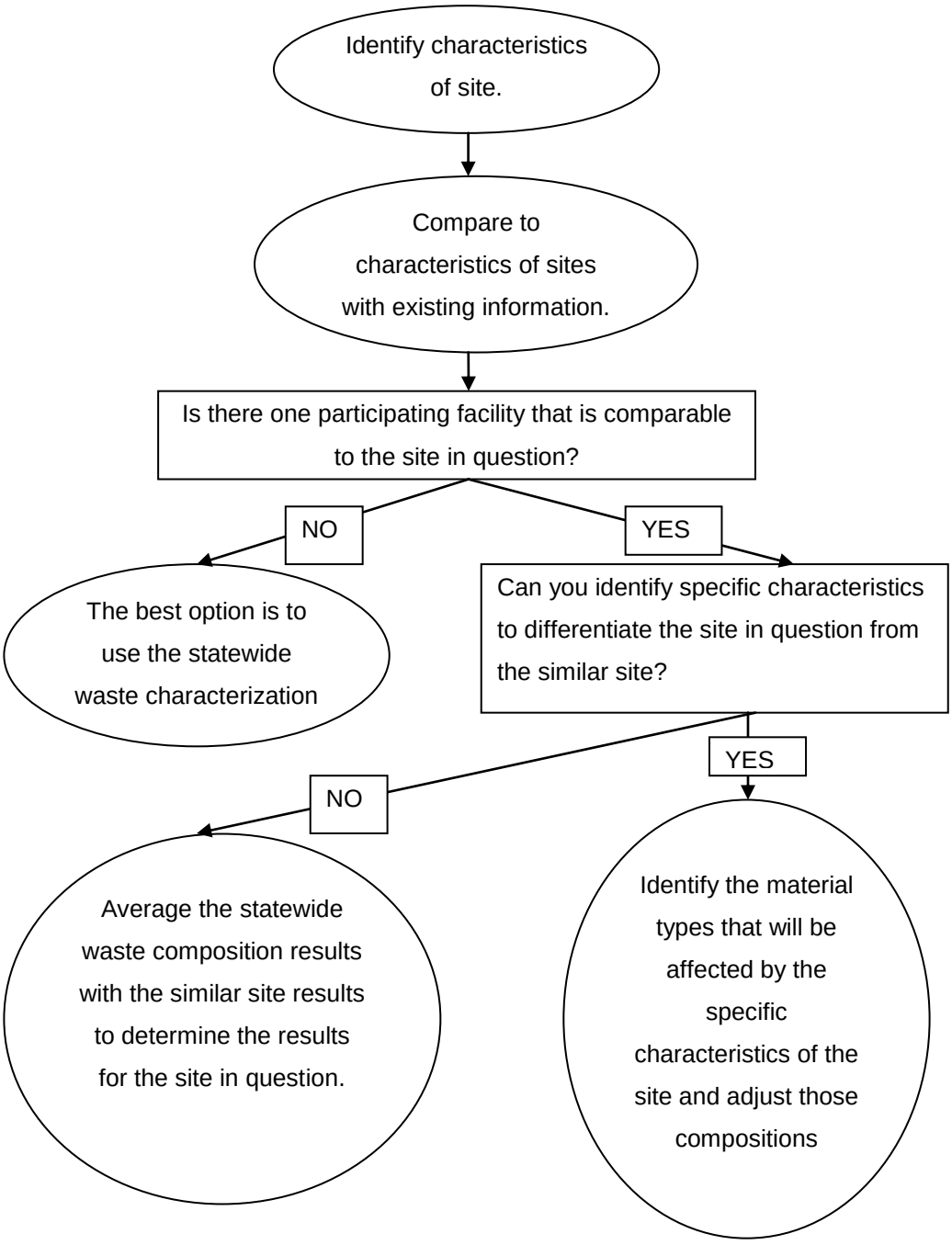


Figure 2-12: Flow Diagram for Characterizing Non-Participating Waste Facility

CHAPTER 3. STUDY RESULTS

3.1. Overview

This section presents the results for the study based on the data from sorting events and tonnage reports for all thirty-one MSW disposal facilities. The research group used a "bottom up" approach in conducting the statistical analysis. In other words, results were calculated individually for the smallest subsets of data, and then aggregated to estimate facility-wide and statewide results. The specific steps of the analysis are summarized below:

- Step 1- Participating Facilities: For each participating facility, 20 samples were used to develop a weighted- average aggregate composition of the MSW entering that facility from Indiana origins. For each sample, the weight of each material was calculated by subtracting tare weight of the tote from the total weight for that material. The single material weights were added up to get the total weight for the sample. Single material weight divided by the total weight of all the 49 materials gives the waste composition percentage for each material category. Using the weight of all the 20 samples for each material category, the weight fraction of a material category for each facility was obtained.
- Step 2- Non-participating Facilities: The study assumes that the MSW composition of participating facilities is the same for non-participating facilities having similar characteristics. The participating and non-participating facilities were grouped into five waste origins: urban (U), suburban (S), rural (R), half urban/half suburban (U/S), and half suburban/half rural (S/R). The data from Step 1 was the basis for determining MSW composition of different origins.
- Step 3- Statewide: The overall statewide results were calculated by aggregating the overall composition for all 31 MSW disposal facilities in Indiana. By multiplying the annual tonnage of each facility by the percent composition of each material category

according to origin type, a MSW composition for that facility can be obtained. The annual tonnage data are from the 2008 Facility Profile Reports as used in the IDEM 2008 Solid Waste Facilities Annual Report (see Table 3-7) (Indiana Department of Environmental Management, Office of Land Quality, 2008).

The study assumes that a representative sample of the statewide overall MSW stream can be obtained based on the sampling and sorting of a subset of Indiana municipal solid waste facilities. The research group's opinion is that the selected four sites and the 18,382 pounds of materials samples provide a representative snapshot of the Indiana MSW stream. In all the tables included in this section, the totals may not sum exactly to 100% due to rounding. Comprehensive results for all the steps described above are provided in Appendix C. The data for every sample sorted (Step 1) are given in Appendix D.

3.2. Statistical Measures

Within each of the results sets described below, this report presents several statistical measures. These are described below:

- Sample Mean – The sample mean composition is the average composition of each material category (or material group) for the samples included in a given results set. Because it is conceptually easy to understand, the sample mean values are often cited as a definitive estimate of the actual mean (i.e., the mean of the entire population). It is important to remember that the sample mean has associated uncertainty, described below.
- Standard Deviation – The standard deviation measures the level of dispersion of the underlying data around the sample mean. Higher standard deviation indicates the individual data points are more widely variant (i.e., spread across a wider range) compared to lower standard deviation.
- Confidence Intervals – The lower and upper confidence intervals indicate the likelihood that the population mean (i.e., the composition of the entire waste stream) falls close to the sample mean (i.e., the samples analyzed in the study). The lower

and upper bound throughout this report have been calculated at a 90 percent level of confidence. In layman's terms, this means we can be 90 percent confident that the fraction of this material in the overall population falls between the lower and upper bound shown. The inverse is also true—that there is a ten percent chance that the true mean falls outside the intervals.

3.3. Participating Facilities

Tables 3-1 through 3-4 depict the composition of municipal solid waste for the four participating facilities by weight and the quantities of the individual material components. The ten most prevalent material types, by weight, are shown in Tables 3-1 through 3-4. The measures provided include the mean and lower and upper bounds of the composition for each of the material categories (see Appendix E). The lower and upper bounds represent a 90% confidence interval for the various material means. Note that the lower and upper bounds are not necessarily equivalent from the mean composition.

Table 3-1: Bartholomew County Landfill

Materials	Mean (%)	Weight (lb)
Paper	31.38	1382.15
Plastic	14.62	640.31
Food Waste	14.13	615.50
Yard Waste	9.34	411.07
Glass	4.63	200.65
Metal	4.16	184.98
Textiles & Leathers	4.13	180.10
Wood	3.69	170.25
Other-Specify	3.31	145.63
Diapers	3.18	140.35

Table 3-2: Adams County Transfer Station		
Materials	**Mean (%)**	**Weight (lb)**
Paper	33.43	1590.27
Plastic	16.77	796.97
Food Waste	13.48	637.45
Yard Waste	6.43	311.10
Diapers	4.89	230.60
Demolition	4.60	225.00
Textiles	4.70	223.85
Metal	3.71	177.05
Glass	3.20	151.45
Wood	2.40	114.44

Table 3-3: Newton County Landfill		
Materials	**Mean (%)**	**Weight (lb)**
Paper	27.88	1299.05
Plastic	17.27	814.69
Wood	8.85	410.34
Food Waste	7.70	365.35
Demolition/Renovation/ Construction Debris	7.23	338.45
Yard Waste	6.75	316.10
Metal	6.67	307.50
Textiles & Leathers	5.85	271.40
Durables	3.62	169.61
Diapers	2.60	118.20

Table 3-4: Daviess County Landfill		
Materials	**Mean (%)**	**Weight (lb)**
Paper	29.29	1338.47
Plastic	16.45	748.28
Food Waste	13.84	634.38
Textiles & Leathers	7.86	356.13
Yard Waste	6.10	278.53
Diapers	5.52	249.24
Metal	5.24	239.18
Glass	4.79	217.11
Durables	3.15	142.04
Demolition/Renovation/ Construction Debris	2.43	105.75

3.4. Non-participating Facility

There are a total of 28 non-participating facilities in Indiana that need estimation based on the MSW composition obtained from sampling. The MSW disposal facilities were divided into five different waste origins: urban (U), suburban(S), rural (R), urban/suburban (U/S) and suburban/rural(S/R). From the methodology R.W. Beck used, similar site results can be used to determine the results for the site in question (R.W. Beck, Inc., 2006) To be more specific, on a composition basis, Newton County Landfill represents urban (U), Bartholomew County Landfill represents suburban (S), average of the compositions of Adams and Daviess represents rural (R), average of the compositions of Newton and Bartholomew represents urban/suburban (U/S), and average of the compositions of Bartholomew and rural (R) represents suburban/rural (S/R). Table 3-5 shows MSW composition from different Indiana origins.

Table 3-5: MSW Composition from Different Indiana Waste Origins					
Materials	**U**	**S**	**R**	**U/S**	**S/R**
Paper	**27.88%**	**31.38%**	**31.36%**	**29.63%**	**31.37%**
OCC and Kraft Bags	10.76%	9.63%	10.73%	10.20%	10.18%
Newspaper	4.23%	7.03%	4.43%	5.63%	5.73%
Magazines	1.66%	3.78%	2.42%	2.72%	3.10%
High Grade/Office	4.98%	3.94%	5.10%	4.46%	4.52%
Mixed Recyclable Paper	1.05%	1.01%	2.07%	1.03%	1.54%
Compostable Paper	4.76%	2.89%	4.96%	3.83%	3.92%
Other Non-recyclable, Non-compostable Paper	0.43%	3.10%	1.65%	1.77%	2.38%
Plastic	**17.27%**	**14.62%**	**16.61%**	**15.95%**	**15.62%**
#1 PET Non-Deposit Beverage Containers	1.22%	1.44%	1.20%	1.33%	1.32%
#1 PET Deposit Beverage Containers	0.91%	1.36%	1.14%	1.13%	1.25%
#1 PET All Other Containers	0.94%	0.34%	0.64%	0.64%	0.49%
#2 HDPE Containers	1.69%	1.37%	1.81%	1.53%	1.59%
# 6 Styrofoam	0.59%	1.03%	1.12%	0.81%	1.07%
All Other Numbered Containers (#3,4,5,6,7)	0.72%	0.83%	0.97%	0.77%	0.90%
Other Plastic – NOT Numbered	6.03%	3.87%	4.29%	4.95%	4.08%
Film/Wrap/Bags	5.19%	4.37%	5.45%	4.78%	4.91%
Metal	**6.67%**	**4.16%**	**4.48%**	**5.41%**	**4.32%**
Aluminum Non-Deposit Beverage Containers	0.39%	0.68%	0.69%	0.54%	0.68%
Aluminum Deposit Beverage Containers	0.08%	0.16%	0.15%	0.12%	0.16%
Aluminum All Other Containers	0.06%	0.55%	0.15%	0.30%	0.35%
Other Non-Ferrous Scrap	0.46%	0.30%	0.35%	0.38%	0.32%
Ferrous Food & Beverage Containers	1.19%	1.78%	1.58%	1.48%	1.68%
Other Ferrous Scrap	4.49%	0.69%	1.55%	2.59%	1.12%
Glass	2.11%	**4.63%**	**4.00%**	**3.37%**	**4.31%**
Clear	1.30%	2.57%	2.28%	1.93%	2.42%
Green	0.26%	0.38%	0.30%	0.32%	0.34%

Table 3-5: MSW Composition from Different Indiana Waste Origins					
Materials	**U**	**S**	**R**	**U/S**	**S/R**
Blue	0.00%	0.00%	0.01%	0.00%	0.01%
Brown	0.55%	1.68%	1.41%	1.12%	1.54%
Yard Waste	6.75%	**9.34%**	**6.27%**	**8.04%**	**7.80%**
Food Waste	7.70%	**14.13%**	**13.66%**	**10.91%**	**13.89%**
Wood	8.85%	**3.69%**	**2.26%**	**6.27%**	**2.98%**
Non-Treated Wood	1.38%	1.02%	0.09%	1.20%	0.55%
Treated Wood	7.47%	2.68%	2.17%	5.07%	2.42%
Demolition/Renovation/ Construction Debris	7.23%	**0.37%**	**3.51%**	**3.80%**	**1.94%**
Durables	3.62%	**4.03%**	**2.58%**	**3.82%**	**3.30%**
All Electrical & Household Appliances	0.78%	1.25%	1.43%	1.02%	1.34%
Central Processing Units/Peripherals	0.00%	0.28%	0.53%	0.14%	0.40%
Computer Monitors/TV's	0.00%	0.00%	0.60%	0.00%	0.30%
Cell Phones	0.00%	0.01%	0.00%	0.00%	0.01%
Other (Furniture & Furnishings)	2.84%	2.48%	0.02%	2.66%	1.25%
Textiles & Leathers	5.85%	**4.13%**	**6.28%**	**4.99%**	**5.20%**
Diapers	2.60%	**3.18%**	**5.21%**	**2.89%**	**4.19%**
Rubbers	0.88%	**0.29%**	**0.34%**	**0.58%**	**0.31%**
Household hazardous Materials	0.21%	**1.73%**	**0.92%**	**0.97%**	**1.33%**
Oil Filters	0.06%	0.16%	0.05%	0.11%	0.11%
Paints & Solvents	0.11%	0.94%	0.46%	0.52%	0.70%
Pesticides, Herbicides, Fungicides	0.00%	0.16%	0.09%	0.08%	0.12%
Household Cleaners	0.00%	0.05%	0.04%	0.03%	0.05%
Batteries (Lead-Acid)	0.00%	0.05%	0.01%	0.03%	0.03%
Batteries (Other)	0.04%	0.09%	0.05%	0.07%	0.07%
Mercury Containing Products	0.00%	0.00%	0.00%	0.00%	0.00%
Other (HHM Containers with Product Inside)	0.00%	0.27%	0.21%	0.13%	0.24%
Sharps	0.01%	**0.00%**	**0.02%**	**0.00%**	**0.01%**
Fines/Supermix	1.86%	**1.02%**	**1.27%**	**1.44%**	**1.15%**

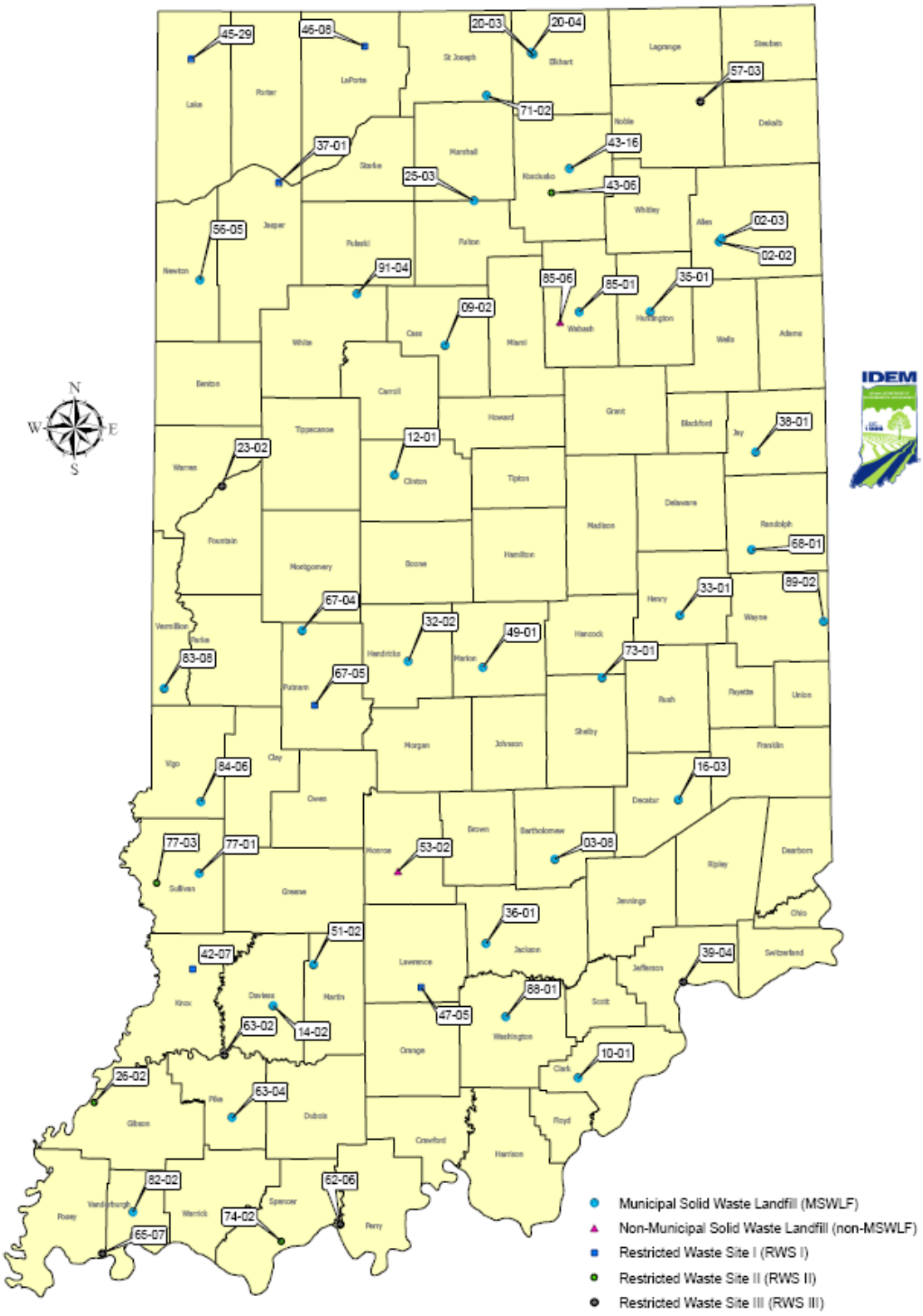
Table 3-5: MSW Composition from Different Indiana Waste Origins					
Materials	**U**	**S**	**R**	**U/S**	**S/R**
Other-Specify	0.53%	**3.31%**	**1.26%**	**1.92%**	**2.28%**
Total	100.00%	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Since the annual tonnage for each MSW disposal facility is known, the overall MSW composition for the state is easy to find. Landfill maps for Indiana are shown in Figures 3-1 and 3-2. Table 3-6 lists the MSW disposal facilities in Indiana grouped according to the five different waste origins. Table 3-7 gives the annual disposal of MSW by state of origin. The summary tables listing the full composition of samples for the three landfills and the Adams County Transfer Station are given in Appendix C.

Figure 3-1 *Landfill Map of IN*

(Black - Urban, Blue - Suburban, Red - Rural, Green - Urban/Suburban, Purple - Suburban/Rural)

Indiana Municipal Solid Waste, Non-Municipal Solid Waste and Restricted Waste Site (I, II and III) Landfills



Permit Number	Site Name	Site Type
02-02	NATIONAL SERV-ALL LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
02-03	UNITED REFUSE LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
03-08	BARTHOLOMEW COUNTY LANDFILL II	MUNICIPAL SOLID WASTE LANDFILL
09-02	OAK RIDGE RECYCLING AND DISPOSAL FACILITY	MUNICIPAL SOLID WASTE LANDFILL
10-01	CLARK FLOYD LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
12-01	CLINTON COUNTY LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
14-02	DAVIESS COUNTY LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
16-03	DECATUR HILLS LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
20-03	EARTHMOVERS LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
20-04	ELKHART COUNTY LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
25-03	COUNTY LINE LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
32-02	TWIN BRIDGES RECYCLING & DISPOSAL FACILITY	MUNICIPAL SOLID WASTE LANDFILL
33-01	HAYES LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
35-01	HUNTINGTON CITY LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
36-01	MEDORA SANITARY LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
38-01	JAY COUNTY LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
43-16	HOOSIER LANDFILL 2	MUNICIPAL SOLID WASTE LANDFILL
49-01	SOUTH SIDE LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
51-02	CRANE NAVAL SURFACE WARFARE CENTER LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
56-05	NEWTON COUNTY LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
63-04	VEOLIA ES BLACKFOOT LANDFILL INC	MUNICIPAL SOLID WASTE LANDFILL
67-04	HERITAGE LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
68-01	RANDOLPH FARMS LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
71-02	PRAIRIE VIEW RECYCLING AND DISPOSAL FACILITY	MUNICIPAL SOLID WASTE LANDFILL
73-01	CALDWELL LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
77-01	SULLIVAN COUNTY LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
82-02	LAUBSCHER MEADOWS LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
83-08	WEST CLINTON LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
84-06	SYCAMORE RIDGE LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
85-01	WABASH VALLEY LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
88-01	WASHINGTON COUNTY LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
89-02	NEW PARIS PIKE LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
91-04	LIBERTY LANDFILL	MUNICIPAL SOLID WASTE LANDFILL
53-02	DILLMAN ROAD WASTEWATER TREATMENT PLANT LANDFILL	NON-MUNICIPAL SOLID WASTE LANDFILL
85-06	WABASH ALLOYS NON-MSWLF	NON-MUNICIPAL SOLID WASTE LANDFILL
37-01	R M SCHAHFER GENERATING STATION RWS 1	RESTRICTED WASTE SITE TYPE I
42-07	SCEPTER RWS 1	RESTRICTED WASTE SITE TYPE I
45-29	US STEEL GARY WORKS RWS 1	RESTRICTED WASTE SITE TYPE I
46-08	COUNTY ROAD 150 EAST SITE	RESTRICTED WASTE SITE TYPE I
47-05	LEHIGH CEMENT CO RWS 1	RESTRICTED WASTE SITE TYPE I
67-05	LONE STAR INDUSTRIES RWS	RESTRICTED WASTE SITE TYPE I
26-02	GIBSON STATION SCRUBBER RWS 2	RESTRICTED WASTE SITE TYPE II
43-06	DALTON FOUNDRY RWS 2	RESTRICTED WASTE SITE TYPE II
74-02	ROCKPORT PLANT ASH RWS 2	RESTRICTED WASTE SITE TYPE II
77-03	MEROM STATION RWS 2	RESTRICTED WASTE SITE TYPE II
23-02	HARRISON STEEL CASTING RWS 3	RESTRICTED WASTE SITE TYPE III
39-04	CLIFTY CREEK COAL ASH DISPOSAL RWS 3	RESTRICTED WASTE SITE TYPE III
57-03	DALTON CORP KENDALLVILLE MANUF. FACILITY MONOF	RESTRICTED WASTE SITE TYPE III
62-06	WAUPACA FOUNDRY RWS 3	RESTRICTED WASTE SITE TYPE III
63-02	IPL PETERSBURG GENERATING STATION RWS 3	RESTRICTED WASTE SITE TYPE III
63-02	IPL PETERSBURG GENERATING STATION RWS 3	RESTRICTED WASTE SITE TYPE III
65-07	SIGECO FILTER CAKE DISPOSAL RWS 3	RESTRICTED WASTE SITE TYPE III

Figure 3-2 *IN Municipal Solid Waste, Non-Municipal Solid Waste and Restricted Waste Site*

Table 3-6: MSW Disposal Facilities in IN	
Origin/ Designation	**Facility Name**
Urban	Newton County Landfill
	South Side Landfill
	Sycamore Ridge Landfill
	National Serv-All Landfill
	Twin Bridges Recycling & Disposal Facility
	Laubscher Meadows Landfill
	Elkhart County Landfill
	Indianapolis Resource Recovery Facility
Suburban	Wabash Valley Landfill
	Oak Ridge Recycling And Disposal Facility
	Caldwell Landfill
	Huntington City Landfill
	Hayes Landfill
	Bartholomew County Landfill
Rural	Randolph Farms Landfill
	Veolia ES Blackfoot Landfill
	Jay County Landfill
	Decatur Hills Landfill
	Medora Sanitary Landfill
	New Paris Pike Landfill
	Hoosier Landfill #2
	Daviess County Landfill
	Washington County Landfill
	CNSW Center Landfill
	West Clinton Landfill
Urban/Suburban	Earthmovers Landfill
	Prairie View Recycling And Disposal Facility
Suburban/Rural	Liberty Landfill
	County Line Landfill
	Clark-Floyd Landfill
	Clinton County Landfill

Table 3-7: Annual Disposal of MSW at Indiana Landfills and Incinerators by Origin, 2008 (Tons)								
County Location	**Facility Name**	**IN**	**IL**	**KY**	**MI**	**OH**	**Other States**	**Total Tons**
Allen	National Serv-All Landfill	495,801			68,965	15,259		580,025
Bartholomew	Bartholomew County Landfill II	81,402						81,402
Cass	Oak Ridge Recycling and Disposal Facility	75,578						75,578
Clark	Clark-Floyd Landfill	146,067		41,404				187,471
Clinton	Clinton County Landfill	63,059						63,059
Daviess	Daviess County Landfill	22,694						22,692
Decatur	Decatur Hills Landfill	129,549						129,549
Elkhart	Earthmovers Landfill	115,519	16		12			115,547
Elkhart	Elkhart County Landfill	92,117	1		72			92,191
Fulton	County Line Landfill	72,715	9,967					82,682
Hendricks	Twin Bridges Recycling and Disposal Facility	577,206						577,206
Henry	Hayes Landfill	44,862						44,862
Huntington	Huntington City Landfill	17,836						17,836
Jackson	Medora Sanitary Landfill	54,850		50,642				105,492
Jay	Jay County Landfill	69,723				86,519		156,242
Kosciusko	Hoosier Landfill 2	65,296						65,296
Marion	Southside Landfill	355,253						355,253
Marion	Indianapolis Resource Recovery Facility	586,494		428		237	653	587,811

Table 3-7: Annual Disposal of MSW at Indiana Landfills and Incinerators by Origin, 2008 (Tons)								
County Location	**Facility Name**	**IN**	**IL**	**KY**	**MI**	**OH**	**Other States**	**Total Tons**
Martin	Crane Naval Surface Warfare Center Landfill	400						400
Newton	Newton County Landfill	543,309	1,917,341					2,460,650
Pike	Veolia ES Blackfoot Landfill Inc	212,582	18	66				212,666
Randolph	Randolph Farms Landfill	230,923				60,362		291,285
St. Joseph	Prairie View Recycling and Disposal Facility	188,624			50			188,674
Shelby	Caldwell Landfill	124,026	2,353			2		126,381
Vanderburgh	Laubscher Meadows Landfill	192,121		2,678				194,799
Vermillion	West Clinton Landfill	509	6					515
Vigo	Sycamore Ridge Landfill	898,725	23,867					922,592
Wabash	Wabash Valley Landfill	198,318						198,318
Washington	Washington County Landfill	16,377						16,377
Wayne	New Paris Pike Landfill	54,649						54,649
White	Liberty Landfill	270,376	322,641					593,017
	Total	**5,996,960**	**2,276,210**	**95,217**	**69,099**	**162,379**	**653**	**8,600,518**

3.5. MSW Imports to Indiana

Approximately 8.6 million tons (includes imports) of MSW were disposed at Indiana waste disposal facilities in 2008, which consist of 30 landfills and the Indianapolis Resource Recovery Facility. Nearly, seventy percent of the MSW was from Indiana origins. The remaining imports were mainly from Illinois. Table 3-8 gives the MSW tonnage disposed in Indiana and the percent origin by state. Table 3-9 estimates the composition of MSW imports from adjacent states. Import tonnages at Indiana waste disposal facilities are listed in Table 3-7.

Table 3-8: Annual Disposal of MSW at IN Landfills and Incinerator by Origin 2008 (Tons)

State of Origin	MSW	Percentage (%)
Indiana	5,996,960	69.7
Illinois	2,276,210	26.4
Ohio	162,379	1.9
Michigan	69,099	0.8
Kentucky	95,217	1.1
Other	653	<0.1
Total	8,600,518	100.00

The compositions for Illinois and Ohio are from their respective waste characterizations studies (Camp Dresser & McKee, Inc., 2009), (Engineering Solutions and Design, Inc., 2004). Default values were assumed for Michigan, Kentucky and “other” based on the final landfill destinations.

Table 3-9: Estimated Composition of MSW Imports to IN

Materials	Illinois	Ohio	Michigan	Kentucky	Other
Paper	**26.2%**	**31.4%**	**27.9%**	**31.4%**	**31.4%**
OCC and Kraft bags	11.0%	10.7%	10.8%	10.2%	10.2%
Newspaper	3.1%	4.4%	4.2%	5.7%	5.7%
Magazines	1.8%	2.4%	1.7%	3.1%	3.1%
High Grade/Office	1.1%	5.1%	5.0%	4.5%	4.5%

Table 3-9: Estimated Composition of MSW Imports to IN					
Materials	**Illinois**	**Ohio**	**Michigan**	**Kentucky**	**Other**
Mixed Recyclable Paper (including Books, Boxboard)	3.1%	2.1%	1.0%	1.5%	1.5%
Compostable Paper	3.3%	5.0%	4.8%	3.9%	3.9%
Other Non-recyclable, Non-compostable Paper	3.0%	1.6%	0.4%	2.4%	2.4%
Plastic	**14.4%**	**16.6%**	**17.3%**	**15.6%**	**15.6%**
#1 PET Non-Deposit Beverage Containers	1.1%	1.2%	1.2%	1.3%	1.3%
#1 PET Deposit Beverage Containers	0.1%	1.1%	0.9%	1.3%	1.3%
#1 PET All Other Containers	0.0%	0.6%	0.9%	0.5%	0.5%
#2 HDPE Containers	1.2%	1.8%	1.7%	1.6%	1.6%
# 6 Styrofoam	0.9%	1.1%	0.6%	1.1%	1.1%
All Other Numbered Containers (#3,4,5,6,7)	0.9%	1.0%	0.7%	0.9%	0.9%
Other Plastic – NOT Numbered	5.6%	4.3%	6.0%	4.1%	4.1%
Film/Wrap/Bags	4.8%	5.4%	5.2%	4.9%	4.9%
Metal	**5.3%**	**4.5%**	**6.7%**	**4.3%**	**4.3%**
Aluminum Non-Deposit Beverage Containers	0.0%	0.7%	0.4%	0.7%	0.7%
Aluminum Deposit Beverage Containers	0.4%	0.2%	0.1%	0.2%	0.2%
Aluminum All Other Containers	0.5%	0.2%	0.1%	0.4%	0.4%
Other Non-Ferrous Scrap	1.1%	0.3%	0.5%	0.3%	0.3%
Ferrous Food & Beverage Containers	1.0%	1.6%	1.2%	1.7%	1.7%
Other Ferrous Scrap	2.2%	1.5%	4.5%	1.1%	1.1%
Glass	**3.2%**	**4.0%**	**2.1%**	**4.3%**	**4.3%**
Clear	2.9%	2.3%	1.3%	2.4%	2.4%
Green	0.0%	0.3%	0.3%	0.3%	0.3%
Blue	0.0%	0.0%	0.0%	0.0%	0.0%
Brown	0.2%	1.4%	0.6%	1.5%	1.5%
Yard Waste	**2.8%**	**6.3%**	**6.7%**	**7.8%**	**7.8%**

Table 3-9: Estimated Composition of MSW Imports to IN					
Materials	**Illinois**	**Ohio**	**Michigan**	**Kentucky**	**Other**
Food Waste	**13.4%**	**13.7%**	**7.7%**	**13.9%**	**13.9%**
Wood	**10.1%**	**2.3%**	**8.9%**	**3.0%**	**3.0%**
Non-Treated Wood	4.3%	0.1%	1.4%	0.6%	0.6%
Treated Wood	5.7%	2.2%	7.5%	2.4%	2.4%
Demolition/Renovation/ Construction Debris	**7.9%**	**3.5%**	**7.2%**	**1.9%**	**1.9%**
Durables	**2.3%**	**2.6%**	**3.6%**	**3.3%**	**3.3%**
All Electrical & Household Appliances	0.0%	1.4%	0.8%	1.3%	1.3%
Central Processing Units/Peripherals	0.0%	0.5%	0.0%	0.4%	0.4%
Computer Monitors/TV's	1.4%	0.6%	0.0%	0.3%	0.3%
Cell Phones	0.0%	0.0%	0.0%	0.0%	0.0%
Other (Furniture & Furnishings)	0.9%	0.0%	2.8%	1.3%	1.3%
Textiles & Leathers	**7.7%**	**6.3%**	**5.8%**	**5.2%**	**5.2%**
Diapers	**2.2%**	**5.2%**	**2.6%**	**4.2%**	**4.2%**
Rubbers	**0.2%**	**0.3%**	**0.9%**	**0.3%**	**0.3%**
Household hazardous Materials	**0.4%**	**0.9%**	**0.2%**	**1.3%**	**1.3%**
Oil Filters	0.1%	0.1%	0.1%	0.1%	**0.1%**
Paints & Solvents	0.1%	0.5%	0.1%	0.7%	**0.7%**
Pesticides, Herbicides, Fungicides	0.0%	0.1%	0.0%	0.1%	**0.1%**
Household Cleaners	0.0%	0.0%	0.0%	0.0%	**0.0%**
Batteries (Lead-Acid)	0.0%	0.0%	0.0%	0.0%	**0.0%**
Batteries (Other)	0.0%	0.0%	0.0%	0.1%	**0.1%**
Mercury Containing Products	0.0%	0.0%	0.0%	0.0%	**0.0%**
Other (HHM Containers with Product Inside)	0.2%	0.2%	0.0%	0.2%	**0.2%**
Sharps	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Fines/Supermix	**0.9%**	**1.3%**	**1.9%**	**1.1%**	**1.1%**
Other-Specify	**2.9%**	**1.3%**	**0.5%**	**2.3%**	**2.3%**
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

3.6. Statewide

This objective characterizes the statewide MSW disposal as received at participating and non-participating facilities in Indiana. Estimates of the MSW composition and material tonnages are given for the (1) overall MSW stream with imports, and (2) statewide MSW stream without imports.

3.6.1. Characterization of MSW Stream with Imports

Composition estimates by broad material class for the overall MSW stream (includes imports) are illustrated in Figure 3-3. The largest material class in the overall waste stream was paper, which accounted for about 30 percent of the waste stream, by weight, followed by plastic *(*16 percent) and food waste (10 percent). Table 3-10 lists the overall Municipal Solid Waste composition (mean value %) by weight and estimated material tonnages.

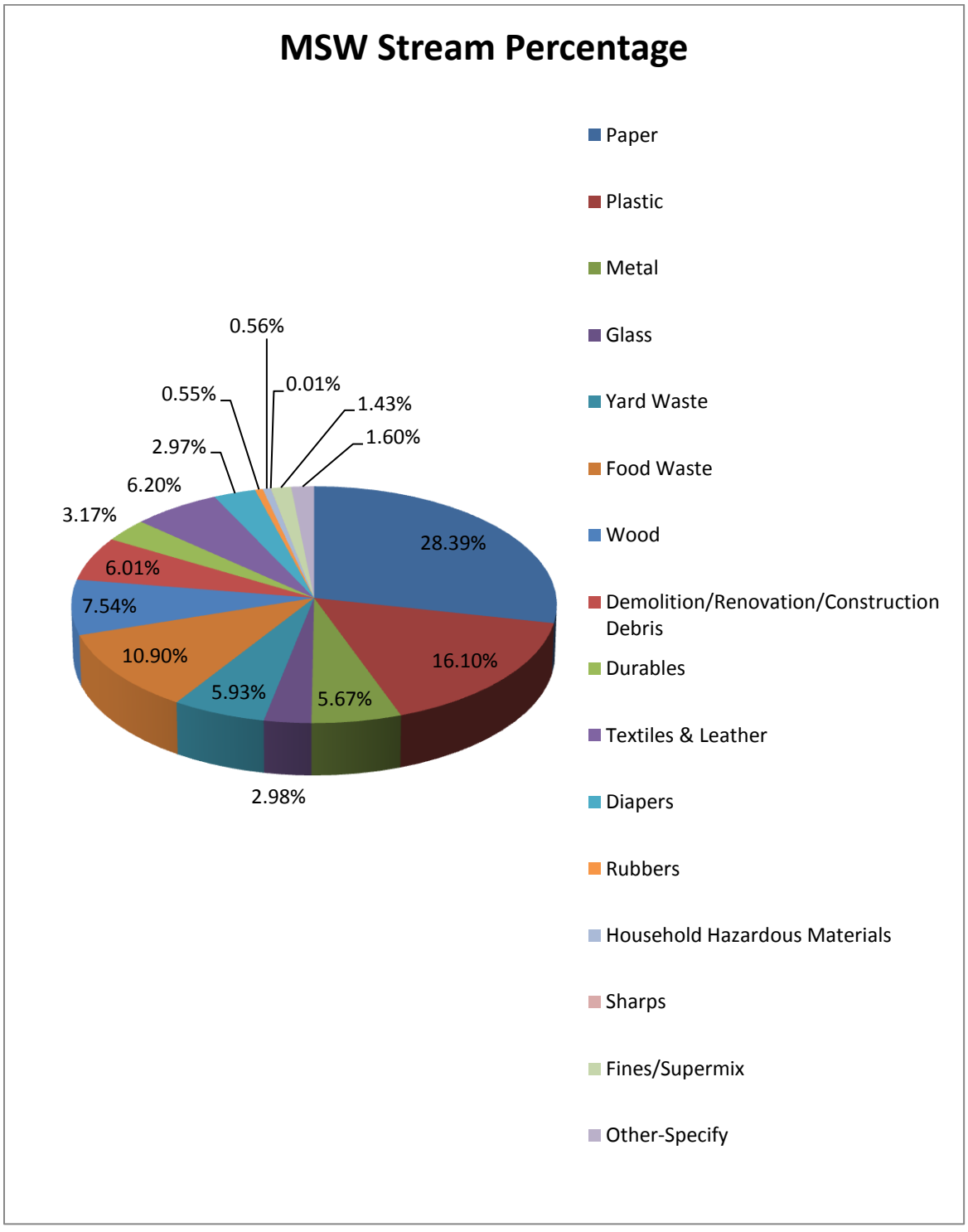


Figure 3-3 *Overall MSW Composition for the State of IN (includes imports)*

Table 3-10: Overall IN MSW Composition (includes imports)		
Materials	**Tonnage**	**Mean (%)**
Paper	**2,442,109**	**28.39%**
OCC and Kraft bags	918,533	10.68%
Newspaper	368,210	4.28%
Magazines	177,142	2.06%
High Grade/Office	330,087	3.84%
Mixed Recyclable Paper	149,034	1.73%
Compostable Paper	359,658	4.18%
Other Non-Recyclable, non-compostable paper	139,445	1.62%
Plastic	**1,384,406**	**16.10%**
#1 PET Non-Deposit Beverage Containers	103,407	1.20%
#1 PET Deposit Beverage Containers	67,028	0.78%
#1 PET All Other Containers	49,153	0.57%
#2 HDPE Containers	131,670	1.53%
# 6 Styrofoam	68,341	0.79%
All Other Numbered Containers (#3,4,5,6,7)	69,556	0.81%
Other Plastic – NOT Numbered	463,236	5.39%
Film/Wrap/Bags	432,017	5.02%
Metal	**487,879**	**5.67%**
Aluminum Non-Deposit Beverage Containers	31,832	0.37%
Aluminum Deposit Beverage Containers	16,649	0.19%
Aluminum All Other Containers	21,806	0.25%
Other Non-Ferrous Scrap	51,495	0.60%
Ferrous Food & Beverage Containers	110,290	1.28%
Other Ferrous Scrap	255,808	2.97%
Glass	**256,067**	**2.98%**
Clear	174,884	2.03%
Green	18,147	0.21%
Blue	159	0.00%
Brown	62,876	0.73%
Yard Waste	**510,322**	**5.93%**
Food Waste	**937,119**	**10.90%**
Wood	**648,110**	**7.54%**
Non-Treated Wood	164,796	1.92%
Treated Wood	483,314	5.62%
Demolition/Renovation/Construction Debris	**517,260**	**6.01%**
Durables	**272,332**	**3.17%**
All Electrical & Household Appliances	63,466	0.74%
Central Processing Units/Peripherals	9,918	0.12%
Computer Monitors/TV's	40,358	0.47%
Cell Phones	121	0.00%

Table 3-10: Overall IN MSW Composition (includes imports)		
Materials	**Tonnage**	**Mean (%)**
Other (Furniture & Furnishings)	158,468	1.84%
Textiles & Leathers	**532,862**	**6.20%**
Diapers	**255,175**	**2.97%**
Rubbers	**47,112**	**0.55%**
Household hazardous Materials	**48,375**	**0.56%**
Oil Filters	6,805	0.08%
Paints & Solvents	22,214	0.26%
Pesticides, Herbicides, Fungicides	2,854	0.03%
Household Cleaners	1,090	0.01%
Batteries (Lead-Acid)	740	0.01%
Batteries (Other)	4,330	0.05%
Mercury Containing Products	179	0.00%
Other (HHM Containers with Product Inside)	10,164	0.12%
Sharps	**1,037**	**0.01%**
Fines/Supermix	**122,719**	**1.43%**
Other-Specify	**137,603**	**1.60%**
Total*	**8,600,518**	**100.00%**

**Rounding difference of 32.57 noted in final total*

3.6.2. Characterization of MSW Stream without Imports

Table 3-11 gives the overall statewide MSW composition without imports.

Table 3-11: Statewide MSW Composition (IN Waste)		
Materials	**Tonnage**	**Mean (%)**
Paper	**1,745,322**	**29.10%**
OCC and Kraft bags	634,150	10.57%
Newspaper	283,031	4.72%
Magazines	128,913	2.15%
High Grade/Office	290,081	4.84%
Mixed Recyclable Paper	73,954	1.23%
Compostable Paper	269,540	4.49%
Other Non-Recyclable, non-compostable paper	65,652	1.09%
Plastic	**1,002,396**	**16.72%**
#1 PET Non-Deposit Beverage Containers	74,993	1.25%
#1 PET Deposit Beverage Containers	61,388	1.02%
#1 PET All Other Containers	46,996	0.78%
#2 HDPE Containers	99,482	1.66%
# 6 Styrofoam	45,714	0.76%
All Other Numbered Containers (#3,4,5,6,7)	46,956	0.78%
Other Plastic – NOT Numbered	320,834	5.35%
Film/Wrap/Bags	306,032	5.10%
Metal	**350,578**	**5.85%**
Aluminum Non-Deposit Beverage Containers	29,780	0.50%
Aluminum Deposit Beverage Containers	6,575	0.11%
Aluminum All Other Containers	9,343	0.16%
Other Non-Ferrous Scrap	24,558	0.41%
Ferrous Food & Beverage Containers	81,452	1.36%
Other Ferrous Scrap	198,870	3.32%
Glass	**172,251**	**2.87%**
Clear	101,295	1.69%
Green	17,159	0.29%

Table 3-11: Statewide MSW Composition (IN Waste)		
Materials	**Tonnage**	**Mean (%)**
Blue	134	0.00%
Brown	53,662	0.89%
Yard Waste	**424,349**	**7.08%**
Food Waste	**591,557**	**9.86%**
Wood	**406,093**	**6.77%**
Non-Treated Wood	64,635	1.08%
Treated Wood	341,459	5.69%
Demolition/Renovation/Construction Debris	**324,662**	**5.41%**
Durables	**209,325**	**3.49%**
All Electrical & Household Appliances	58,877	0.98%
Central Processing Units/Peripherals	8,677	0.14%
Computer Monitors/TV's	6,810	0.11%
Cell Phones	111	0.00%
Other (Furniture & Furnishings)	134,850	2.25%
Textiles & Leathers	**338,794**	**5.65%**
Diapers	**190,987**	**3.18%**
Rubbers	**40,784**	**0.68%**
Household hazardous Materials	**35,418**	**0.59%**
Oil Filters	4,516	0.08%
Paints & Solvents	18,478	0.31%
Pesticides, Herbicides, Fungicides	2,568	0.04%
Household Cleaners	979	0.02%
Batteries (Lead-Acid)	627	0.01%
Batteries (Other)	3,081	0.05%
Mercury Containing Products	161	0.00%
Other (HHM Containers with Product Inside)	5,009	0.08%
Sharps	**489**	**0.01%**
Fines/Supermix	**96,799**	**1.61%**
Other-Specify	**67,157**	**1.12%**
Total	**5,996,960**	**100.00%**

CHAPTER 4. COMPARISON AND DIVERSION OPPORTUNITIES

4.1. Introduction

This report section compares the overall Indiana Statewide MSW Composition Study results (excludes imports) to other state and national results. In addition, potential opportunities for diverting additional materials from disposal are identified for further analysis.

The comparison consists of three aspects. First, the statewide MSW compositions for different Indiana waste origins (urban, suburban, rural) were compared to see what is going on in the waste stream. Next, the mean percentages for the material categories in Indiana and other states were compared. For a third comparison, the Indiana results were compared to the national record.

4.2. Study Comparison for Urban/Suburban/Rural

Table 4-1: IN MSW Composition Comparison for U/S/R Waste Origins						
	Urban		**Suburban**		**Rural**	
Materials	**Tonnage**	**%**	**Tonnage**	**%**	**Tonnage**	**%**
Paper	**1,042,983**	**27.88%**	**170,064**	**31.38%**	**268,941**	**31.36%**
OCC and Kraft bags	402,630	10.76%	52,212	9.63%	92,056	10.73%
Newspaper	158,226	4.23%	38,091	7.03%	37,967	4.43%
Magazines	62,284	1.66%	20,462	3.78%	20,780	2.42%
High Grade/Office	186,480	4.98%	21,343	3.94%	43,736	5.10%
Mixed Recyclable Paper (including Books, Boxboard)	39,133	1.05%	5,451	1.01%	17,756	2.07%
Compostable Paper	178,058	4.76%	15,676	2.89%	42,500	4.96%
Other Non-recyclable, Non-compostable Paper	16,172	0.43%	16,830	3.10%	14,144	1.65%
Plastic	**645,944**	**17.27%**	**79,264**	**14.62%**	**142,451**	**16.61%**
#1 PET Non-Deposit Beverage Containers	45,571	1.22%	7,828	1.44%	10,256	1.20%
#1 PET Deposit Beverage Containers	33,884	0.91%	7,369	1.36%	9,786	1.14%
#1 PET All Other Containers	34,988	0.94%	1,863	0.34%	5,485	0.64%
#2 HDPE Containers	63,159	1.69%	7,424	1.37%	15,482	1.81%
# 6 Styrofoam	22,136	0.59%	5,586	1.03%	9,592	1.12%
All Other Numbered Containers (#3,4,5,6,7)	26,782	0.72%	4,511	0.83%	8,329	0.97%
Other Plastic – NOT Numbered	225,438	6.03%	21,000	3.87%	36,796	4.29%
Film/Wrap/Bags	193,986	5.19%	23,684	4.37%	46,724	5.45%
Metal	**249,360**	**6.67%**	**22,532**	**4.16%**	**38,390**	**4.48%**
Aluminum Non-Deposit Beverage Containers	14,764	0.39%	3,678	0.68%	5,925	0.69%
Aluminum Deposit Beverage Containers	3,158	0.08%	879	0.16%	1,298	0.15%
Aluminum All Other Containers	2,200	0.06%	2,981	0.55%	1,299	0.15%
Other Non-Ferrous Scrap	17,037	0.46%	1,604	0.30%	2,993	0.35%

Table 4-1: IN MSW Composition Comparison for U/S/R Waste Origins						
	Urban		Suburban		Rural	
Materials	Tonnage	%	Tonnage	%	Tonnage	%
Ferrous Food & Beverage Containers	44,404	1.19%	9,656	1.78%	13,586	1.58%
Other Ferrous Scrap	167,797	4.49%	3,734	0.69%	13,289	1.55%
Glass	**78,816**	2.11%	**25,106**	**4.63%**	**34,261**	**4.00%**
Clear	48,548	1.30%	13,920	2.57%	19,560	2.28%
Green	9,683	0.26%	2,073	0.38%	2,551	0.30%
Blue	-	0.00%	-	0.00%	101	0.01%
Brown	20,584	0.55%	9,113	1.68%	12,049	1.41%
Yard Waste	**252,445**	6.75%	**50,623**	**9.34%**	**53,729**	**6.27%**
Food Waste	**287,932**	7.70%	**76,580**	**14.13%**	**117,132**	**13.66%**
Wood	**331,204**	8.85%	**20,026**	**3.69%**	**19,349**	**2.26%**
Non-Treated Wood	51,698	1.38%	5,509	1.02%	737	0.09%
Treated Wood	279,506	7.47%	14,518	2.68%	18,612	2.17%
Demolition/Renovation/ Construction Debris	**270,300**	7.23%	**1,980**	**0.37%**	**30,129**	**3.51%**
Durables	**135,549**	3.62%	**21,819**	**4.03%**	**22,095**	**2.58%**
All Electrical & Household Appliances	29,351	0.78%	6,795	1.25%	12,231	1.43%
Central Processing Units/Peripherals	-	0.00%	1,513	0.28%	4,514	0.53%
Computer Monitors/TV's	-	0.00%	-	0.00%	5,152	0.60%
Cell Phones	-	0.00%	44	0.01%	24	0.00%
Other (Furniture & Furnishings)	106,199	2.84%	13,466	2.48%	174	0.02%
Textiles & Leathers	**218,686**	5.85%	**22,366**	**4.13%**	**53,846**	**6.28%**
Diapers	**97,202**	2.60%	**17,220**	**3.18%**	**44,639**	**5.21%**
Rubbers	**32,856**	0.88%	**1,550**	**0.29%**	**2,889**	**0.34%**
Household hazardous Materials	**7,875**	0.21%	**9,400**	**1.73%**	**7,865**	**0.92%**
Oil Filters	2,244	0.06%	880	0.16%	458	0.05%
Paints & Solvents	3,974	0.11%	5,106	0.94%	3,936	0.46%
Pesticides, Herbicides, Fungicides	-	0.00%	862	0.16%	775	0.09%

Table 4-1: IN MSW Composition Comparison for U/S/R Waste Origins						
	Urban		Suburban		Rural	
Materials	Tonnage	%	Tonnage	%	Tonnage	%
Household Cleaners	-	0.00%	290	0.05%	349	0.04%
Batteries (Lead-Acid)	-	0.00%	288	0.05%	84	0.01%
Batteries (Other)	1,545	0.04%	514	0.09%	419	0.05%
Mercury Containing Products	113	0.00%	-	0.00%	33	0.00%
Other (HHM Containers with Product Inside)	-	0.00%	1,460	0.27%	1,811	0.21%
Sharps	**207**	0.01%	**6**	**0.00%**	**199**	**0.02%**
Fines/Supermix	**69,671**	1.86%	**5,550**	**1.02%**	**10,864**	**1.27%**
Other-Specify	**19,996**	0.53%	**17,936**	**3.31%**	**10,774**	**1.26%**
Total	**3,741,026**	100.00%	**542,022**	**100.00%**	**857,552**	**100.00%**

Comparing overall MSW composition for U/S/R for Indiana, some findings were obtained:

- For urban site, a higher percentage was found in the following material subcategories: High grade/office paper, Other plastic-not numbered, Other ferrous scrap, Wood, Demolition/ renovation/construction debris. Also, a lower percentage was found in the following material subcategories: Other non-recyclable, non-compostable paper, #1 PET non-deposit beverage container, #6 Styrofoam, Aluminum containers, Clear bottles, Food waste.
- For suburban site, a higher percentage was found in the following material subcategories: Magazines, Other non-recyclable, non-compostable paper, #1 PET beverage container, Aluminum all other containers, Ferrous food & beverage containers, Yard waste, Food waste, Household hazardous materials. Also, a lower percentage was found in the following material subcategories: High grade/office paper, Compostable paper, Other ferrous scrap, Wood, Demolition/ renovation/construction debris.
- For rural site, a higher percentage was found in the following material subcategories: Textiles & leathers, Diapers. Also, a lower percentage was found in the durables category.

4.3. Study Comparison with Other States

For individual state comparison, data is presented by each main material category. Figures 4-1 through 4-8 show the comparisons between nine states for eight, main categories. The nine states are Indiana (IN12), Illinois (IL09), Iowa (IA06, IA98), Pennsylvania (PA03), Wisconsin (WI03), Minnesota (MN00), California (CA04), Georgia (GA05) and Delaware (DE07) (Cascadia Consulting Group, Inc.; DSM Environmental Services, Inc.; MSW Consultants, 2007). These studies list compositions by main categories. When calculating the percentages for these states, data representative of residential, commercial and institutional sectors were used. The sample composition of the Indiana solid waste stream is mainly from the residential sector. This should be taken into account when considering the comparisons made.

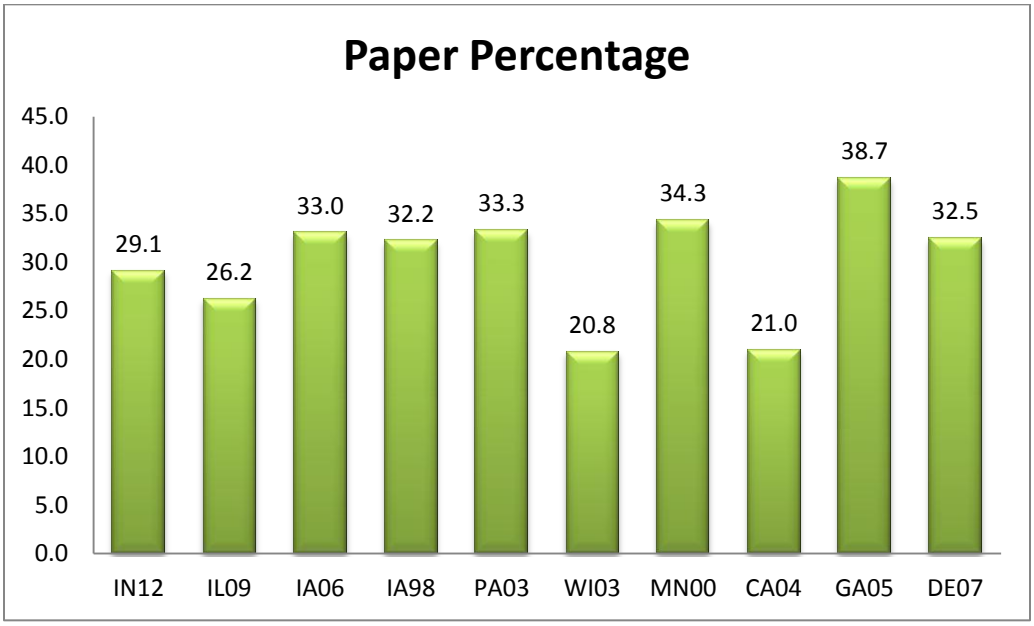


Figure 4-1 *State Comparison of Percentage for Paper Component*

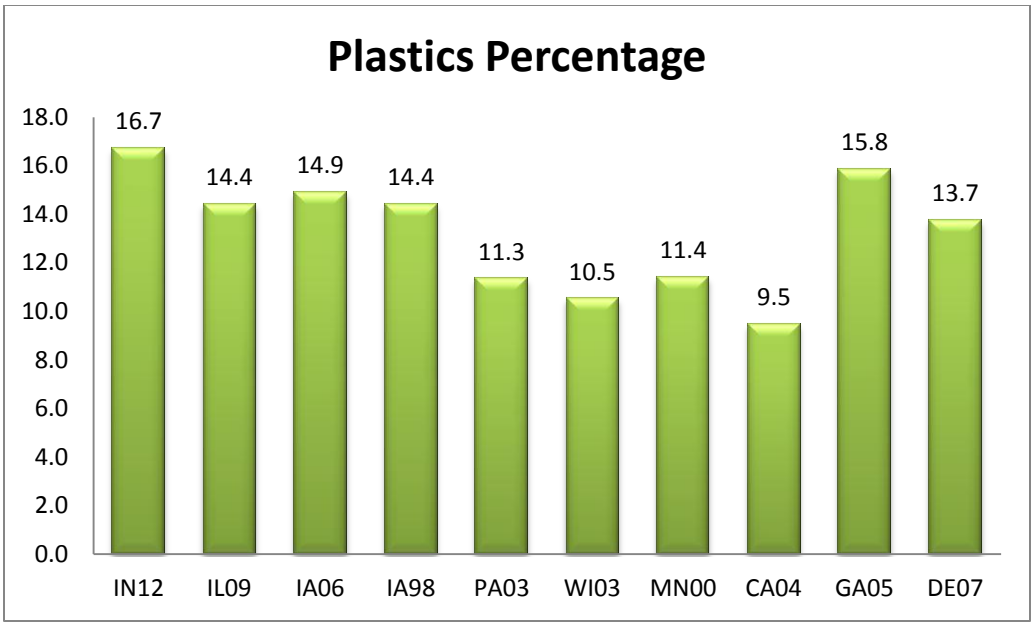


Figure 4-2 *State Comparison of Percentage for Plastic Component*

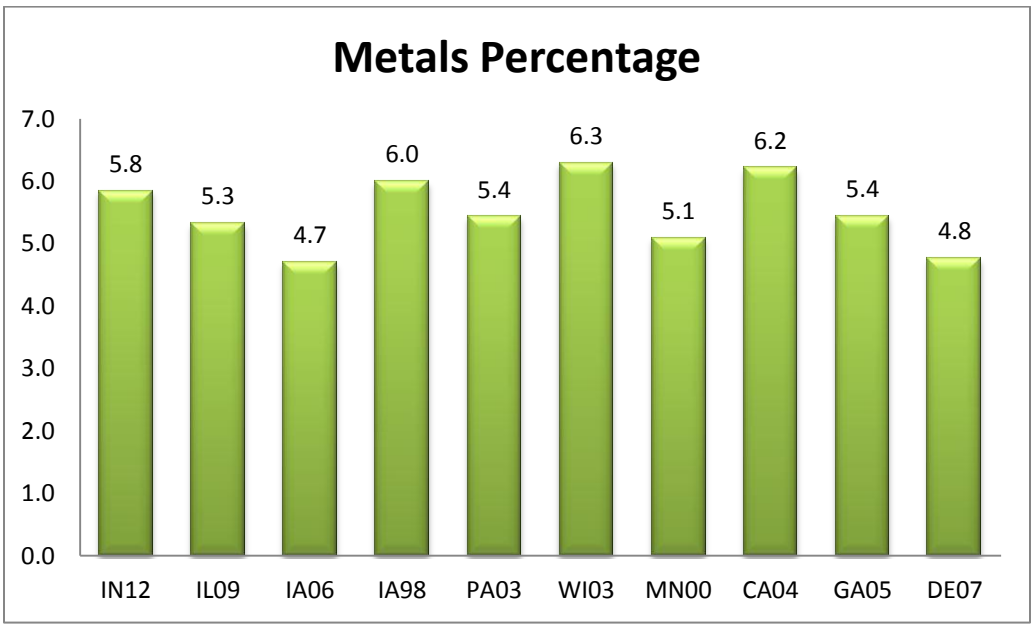


Figure 4-3 *State Comparison of Percentage for Metal Component*

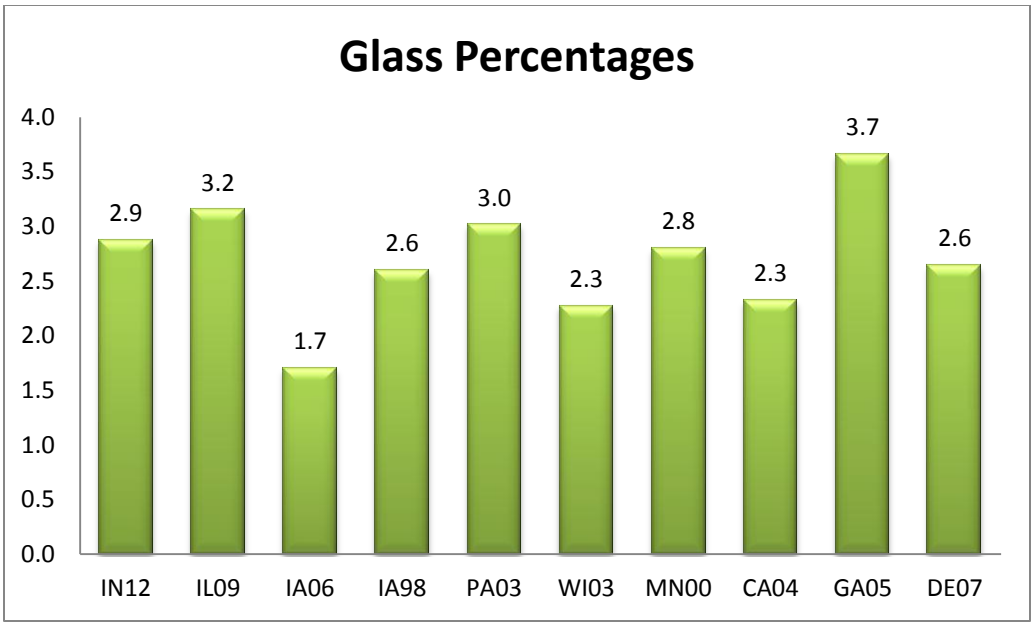


Figure 4-4 *State Comparison of Percentage for Glass Component*

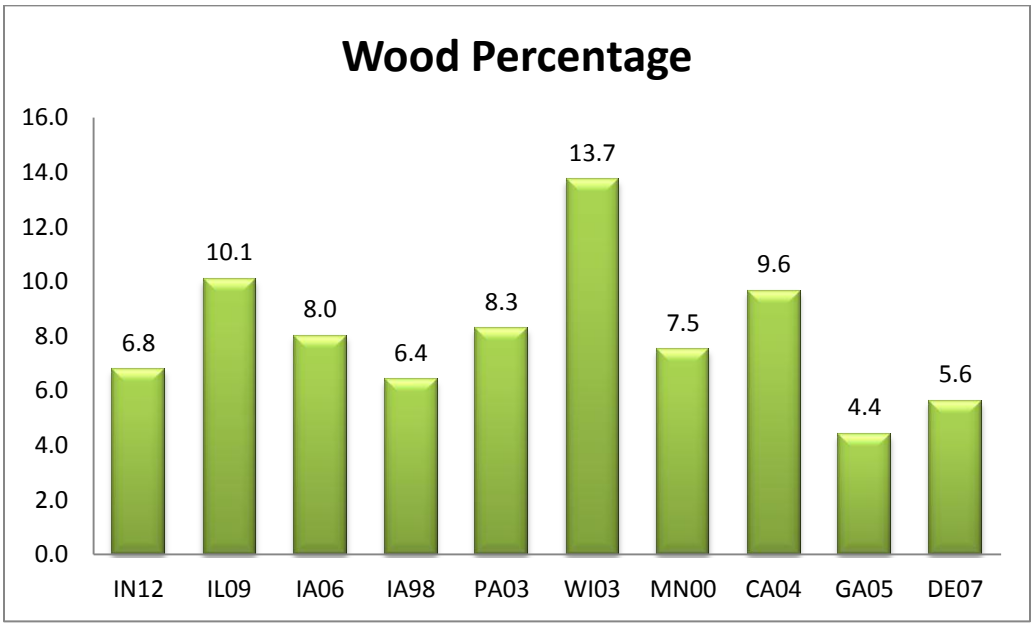


Figure 4-5 *State Comparison of Percentage for Wood Component*

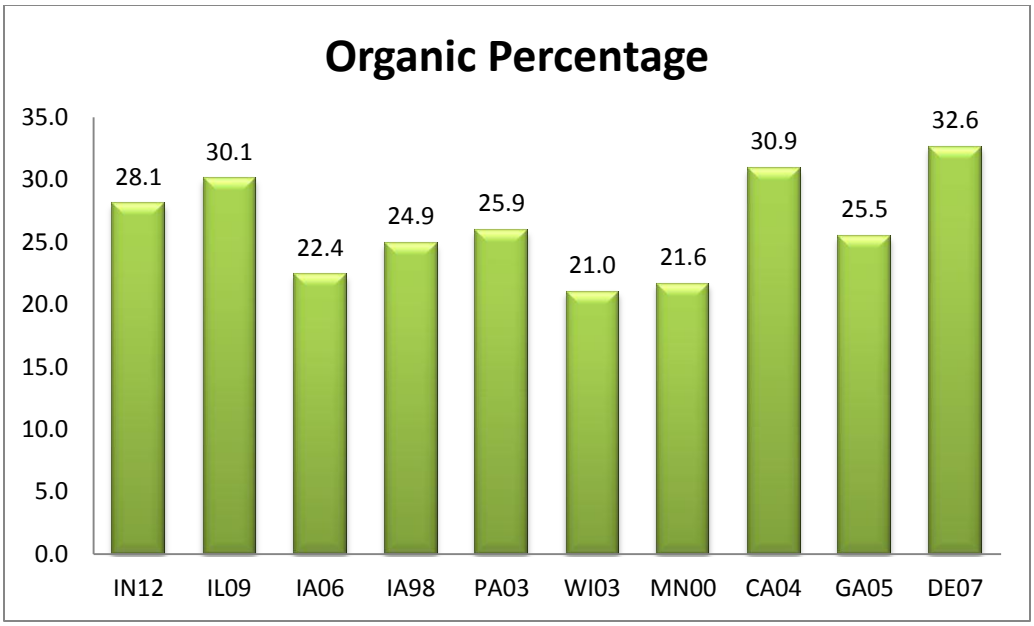


Figure 4-6 *State Comparison of Percentage for Organic Component*

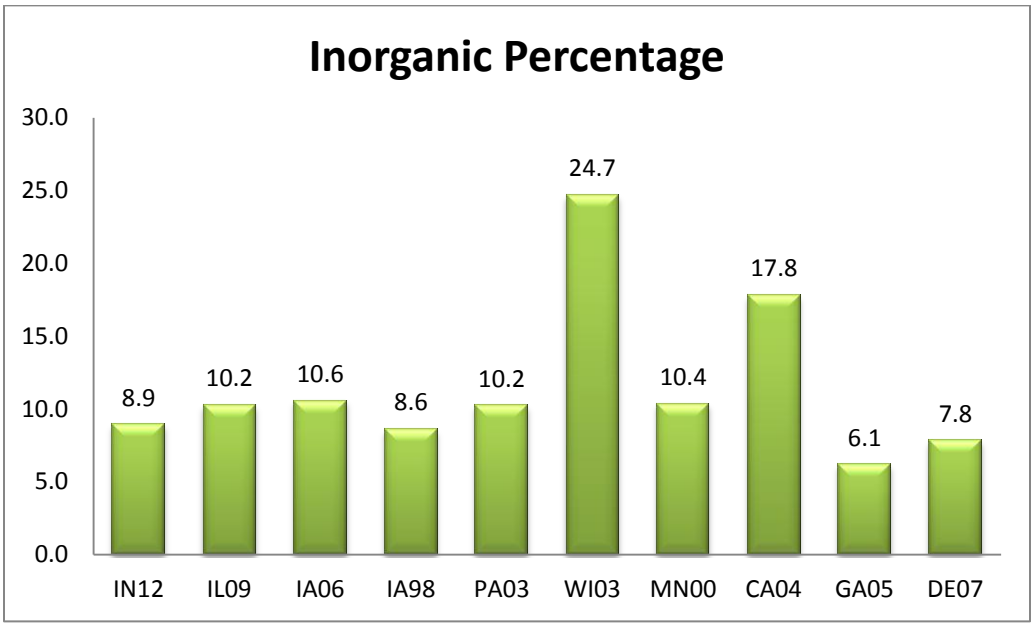


Figure 4-7 *State Comparison of Percentage for Inorganic Component*

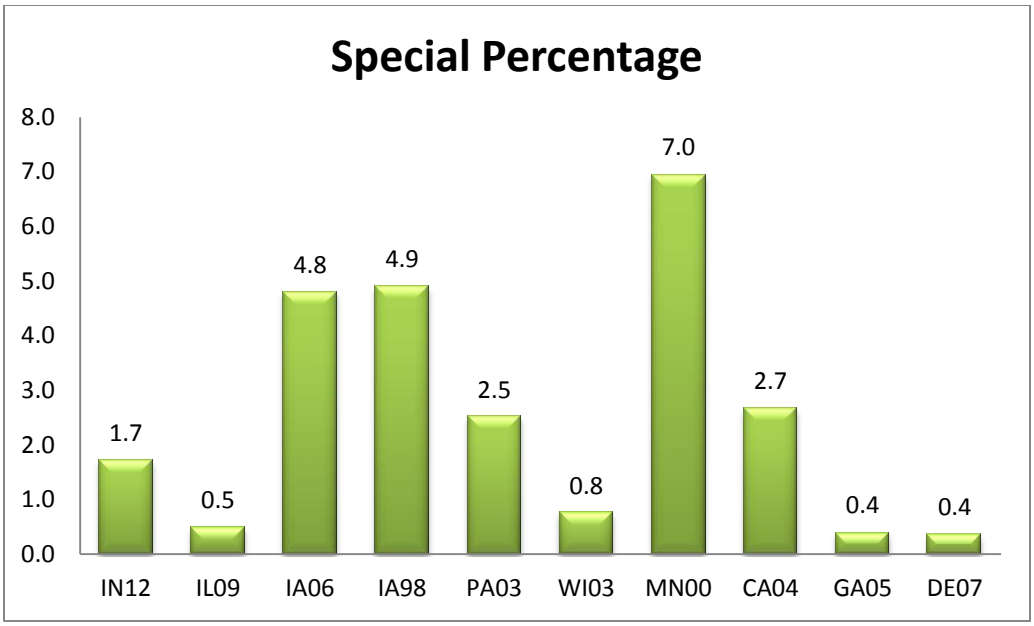


Figure 4-8 *State Comparison of Percentage for Special* Component*

* Special waste includes ash, sewage solid, industrial sludge, treated medical waste, bulky item, tires, etc.

Comparing the main material catergories among nine states, some findings were obtained (United States Environmental Protection Agency, 2008):

- Wisconsin and Califorina have siginificant lower percentage of paper; 20.8 and 21.0 respectively
- Indiana has the highest percentage of plastic (16.7) compared with the average level of 13.3
- Indiana has the lowest percentage of special (1.7) compared with the average level of 2.6
- Indiana has lower percentage of inorganics (8.9) compared with the average level of 11.5
- Georgia has the lowest percentage of wood (4.4) compared with the average level of 8.0
- Composition percentage of MSW in Indiana is in the middle range of all nine states on paper (29.1), metal (5.8), glass (2.9), wood (6.8) and organic (28.1)

Comparing the overall MSW compostion among nine states (see Appendix C), a higher percentage in the following material subcategories for Indiana was found:

- High grade/office paper
- OCC and Kraft bags
- #1 PET bottle
- #2 HDPE bottle
- Remainder/ composite and other plastic
- Other ferrous scrap
- Treated wood

Comparing the overall MSW compostion among nine states (see Appendix C), a lower percentage in the following material subcategories for Indiana was found:

- Other non-recyclable/non-compostable paper,
- Mixed recyclable paper
- Other glass
- Non-treated wood.
- Food waste

4.4. Study Comparison with National Results

The overall MSW composition result was compared to the United States' result from EPA in Table 4-2 (United States Environmental Protection Agency, 2008). Estimated disposal tonnages of MSW are also given.

Table 4-2: Comparison Between IN and National Results					
	Material	**Indiana (thousands of tons)**	**%**	**United States, 2008 (thousands of tons)**	**%**
1	Paper and Paperboard	1,745	29.1%	34,515	20.7%
2	Glass	172	2.9%	9,337	5.6%
3	**Total Metals (Rows 4-6)**	**351**	**5.8%**	**13,506**	**8.1%**
4	Ferrous	280	4.7%	10,338	6.2%
5	Aluminum	46	0.8%	2,668	1.6%
6	Other Nonferrous	25	0.4%	500	0.3%
7	Plastics	1,002	16.7%	28,012	16.8%
8	Rubber and Leather	41	0.7%	6,336	3.8%
9	Textiles	339	5.6%	10,505	6.3%
10	Wood	406	6.8%	14,840	8.9%
11	Other	0	0.0%	3,335	2.0%
12	**Total Materials in Products (Rows 1-3, 7-11)**	**4,056**	**67.6%**	**120,386**	**72.2%**
13	Food Scraps	592	9.9%	30,847	18.5%
14	Yard Trimmings	424	7.1%	11,672	7.0%
15	Miscellaneous Inorganic Wastes	925	15.4%	3,835	2.3%
16	**Total Other Wastes (Rows 13-15)**	**1,941**	**32.4%**	**46,354**	**27.8%**
17	**Total MSW Discarded (Rows 12, 16)**	**5,997**	**100.0%**	**166,740**	**100.0%**

Comparing the Indiana results with national results, a higher percentage in the following material categories for Indiana was found:

- Paper and Paperboard
- Miscellaneous Inorganic Wastes

Comparing the Indiana results with national results, a lower percentage in the following material categories for Indiana was found:

- Glass
- Ferrous
- Aluminum
- Total Metal
- Textiles
- Wood
- Food Scraps

4.5. Recycling Opportunities

From review of the comparative analyses provided above, the statewide disposed MSW stream continues to be composed of materials that may be recycled.

By itself, the paper component includes more than 1,410,129 tons of fiber that are recyclable; including high grade, magazines, newsprint, OCC, and mixed recyclable paper. The two largest material categories composing the primary category of paper are OCC with approximately 634,150 tons and high grade/office with approximately 290,081 tons. In addition, about 269,540 tons of compostable paper could be composted. Therefore, the disposed paper component of the MSW stream includes a total of more than 1,745,322 tons of materials that could be recovered through composting and recycling. This equates to nearly 29% of the total MSW landfilled.

The remainder of the disposed MSW stream offers some additional recycling and composting opportunities. The top five materials based on both their potential for recovery and the total quantities disposed includes the following:

- Food waste (591,557 tons). Food discards can be donated, used for animal feed, rendered, or composted. The ability to recover food waste is generally tied to the cost effectiveness of collection and processing and the extent of contamination that accompanies any collection program.
- Demolition/construction debris (324,662 tons). Many communities and supporting state program recovery efforts around the U.S. focus on the recoverable portion of this substream including metals, carpet, shingles, wood, drywall, and OCC. Please note that the MSW results only represent the portion of this substream that is commingled with MSW and transported to MSW landfills for disposal. Approximately 5.4% of the MSW stream is composed of demolition/construction debris. The dedicated loads of demolition/construction debris were not included as part of the Solid Waste composition results. Existing demolition/construction debris recovery programs and infrastructure should be expanded to other regions of Indiana that do not have programs and infrastructure.
- Textiles and leather (338,794 tons). This category of materials also has been

given additional consideration by communities throughout the U.S. within the last decade because of the establishment of viable end markets for recovery and reuse of clothing and rags. Promotion of additional recovery should be tied directly to identifying sustainable end markets.

- Film/wrap/bags (306,032 tons). End use markets exist for the recovery of plastic film. The key barrier precluding additional recovery is the extensive amount of contamination generally accompanying this type of material discard.
- Non-treated wood (64,635 tons). This subcategory of wood is primarily associated with pallets and crates that are prevalent in the industrial/commercial/institutional (ICI) stream. The largest barrier associated with the recovery of this material is generally the extent of contamination.

4.6. Conclusions

Some of the key conclusions that can be drawn from the above analysis include the following:

1. First study of MSW characterization for Indiana was successfully completed.
2. Methodology used gave comparable results to similar states.
3. OCC (634,150 tons, 10.6%), Mixed recyclable paper (73,954 tons, 1.2%), and Film/wrap/bags (306,032 tons, 5.1%) represent some of the greatest opportunities for source reduction and recycling in the Solid Waste stream.
4. Food waste (591,557 tons, 9.9%) and Compostable paper (269,540 tons, 4.5%) represent some of the greatest opportunities for source reduction and recycling through composting in MSW stream.

4.7. Recommendations

- In order to have a more reliable MSW composition result, more sites could be sampled. Meanwhile, the reason for a landfill should participate in such a study should be established.
- Since permission to sample at many landfills was difficult to obtain, better cooperation of landfills, both public and private, in state is necessary.

- Add information to the IN map project. For more information about IN map project please refer to *HTTP://INMAP.INDIANA.EDU/VIEWER.HTM*.

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Appendix A. Waste Sort Categories

PAPER	
OCC and Kraft Bags	Uncoated old corrugated cardboard (OCC) with a wavy core and not contaminated with other materials such as a wax or plastic coating wood. Includes brown paper bags.
Newspaper	Black and white newspaper news print including other paper normally distributed inside a newspaper such as colored advertisements, comics, fliers, tabloids.
Magazines	All magazines plus promotional materials printed on slick paper.
High Grade Office	High grade continuous form computer paper, white paper including bond, photocopy or notebook paper and colored ledger paper primarily from offices
Mixed Recyclable Paper	Box board - Uncoated; primarily used for boxes (such as cereal boxes and egg cartons), envelopes with and without windows, toilet paper cores and other mixed recyclable paper. Includes books.
Compostable Paper	Paper products including wax-coated paper, napkins, paper towels, frozen food packaging, tissues, paper plates, cups, and pizza boxes
Non-Recyclable Paper	Plastic or metal coated paper.

PLASTIC	
#1 (PET) Non-deposit Beverage Containers	Plastic containers coded #1 used for containing water, fruit juice, sports drink, or ice tea without an deposit label and are no more than 3 liters (.8 gallons) and no less than 5 ounces in size
#1 PET Deposit Beverage Containers	Plastic containers coded #1 with an deposit
#1 PET All Other Containers	Plastic containers coded #1 not used for containing water, fruit juice, sports drink, ice tea, wine, liquor, beer, soda water or similar carbonated drinks without an deposit label and all PET containers larger than 3 liters (.8 gallons) and smaller than 5 ounces regardless of contents
#2 High Density Polyethylene (HDPE) Containers	Plastic containers such as milk jugs, shampoo bottles, and laundry detergent bottles coded #2.
#6 Styrofoam	Packaging made primarily from foam polystyrene that satisfies one of the following criteria: (a) Is designed for serving food or beverages. (b) Consists of loose particles intended to fill space and cushion the packaged article in a shipping container. (c) Consists of rigid materials shaped to hold and cushion the packaged article in a shipping container.

PLASTIC	
All other Numbered Containers (#3,4,5,6,7)	All other plastic “3” – “7” bottles that narrow down to a neck.
Other Plastic-NOT Numbered	Other plastic without number on it
Film/Warp/Bags	Trash bags, grocery bags, storage bags, sheet film plastic.

METAL	
Aluminum Non-Deposit Beverage Containers	All beverage containers made from aluminum without an deposit label
Aluminum Deposit Beverage Container	All beverage containers made from aluminum with an deposit label
Aluminum All other Containers	Aluminum containers not used for containing water, fruit juice, sports drink, ice tea, wine, liquor, beer, soda water or similar carbonated soft drinks without an Iowa deposit label and all containers larger than 3 liters (.8 gallons) and smaller than 5 ounces regardless of contents
Other Non-Ferrous Scrap	Other aluminum scraps besides beverage containers. Also includes other non-ferrous metal scrap such as brass, copper, or other nonmagnetic metal.
Ferrous Food & Beverage Containers	Food and beverage containers composed primarily of iron
Other Ferrous Scrap	Ferrous metal besides containers, including clothes hangers, sheet metal products, pipes, miscellaneous metal scraps, and other magnetic metal items.

GLASS	
Clear Bottles	All clear glass food, beverage, wine, liquor and beer containers
Green Bottles	All green glass food, beverage, wine, liquor and beer containers
Blue Bottles	All blue glass food, beverage, wine, liquor and beer containers
Brown Bottles	All brown glass food, beverage, wine, liquor and beer containers

YARD WASTE	
	Debris such as grass clippings, leaves, garden waste, brush, and trees. Yard waste does include tree stumps

FOOD WASTE	
	Food preparation wastes, food scraps, spoiled food.

WOOD	
Non-treated Wood	Pallets, crates, and wood not defined below as treated.
Treated Wood	Wood that is painted, stained, treated for exterior use, or glued such as plywood.

DEMOLITION / REONOVATION / CONSTRUCTION DEBRIS
Waste building materials including, metals, and rubble which result from construction or demolition of structures. Such waste shall also include carpets, rugs, bricks, mortar, shingles, and drywall. Wood should be sorted into the wood categories

DURABLES	
Electrical & House Hold Appliances	Toasters, stereos, other small appliances and electronic equipment
Central Processing Units/Peripherals	Computer components except for monitors
Computer Monitors/TV's	Self-explanatory.
Cell phone	Self-explanatory.
Other (Furniture & Furnishings)	Household furniture and mattresses

TEXTILES & LEATHERS
Clothing and apparel, shop rags, blankets, shoes, leather products, such as wallets, purses, belts and scrap leather

DIAPERS
Adult or infant disposable diapers, clean or soiled

RUBBER
Rubber tubing, mats, hose, tires and some shoes.

HOUSEHOLD HAZARDOUS MATERIALS	
Substances categorized by the U.S. Environmental Protection Agency (EPA) as: Corrosive, destroy human tissue or corrode metal; flammable, easily ignitable; toxic, poisonous; reactive, react violently when exposed to heat, sudden shock, pressure or other chemicals.	
Oil Filters	
Paint & Solvents	
Pesticides, Herbicides, and Fungicides	
Household Cleaners	
Batteries (Lead-Acid)	

HOUSEHOLD HAZARDOUS MATERIALS	
Batteries (Other)	
Mercury Containing Products	Thermostats, thermometers, light switches, and other items containing mercury.
Other (HHM Containers with Products inside)	

SHARPS
Hypodermic needles.

FINES/SUPERMIX
Material fragments that are 2” sq. or less, and do not pass through the sort screen. These materials will be visually categorized into their respective component categories

OTHER-SPECIFY

Appendix B. Questions for Landfill Operator

1. What are the origins of the waste? Are they residential, industrial/commercial/institutional (ICI), or mixed?*
2. How much waste is received daily?
3. What types of hauling vehicles are used (inside and outside of the landfill)?
4. Are any other activities performed on the site (recycling and aluminum can collecting)?
5. Do you receive waste from any nearby manufacturing centers?
6. What portion of the waste comes from out of state?
7. Do the municipal areas relevant to this center practice curbside recycling?
8. What hours do the employees work?
9. What time does the first truck come into the landfill?
10. What are the best hours for us to conduct the sorts?
11. Is it possible for the center to presort the wastes for us? If so, what would be the cost?
12. Do you have a scales, bins, or tables that we can use?
13. Do we need to get any shots or physicals before working?
14. Do you have a machine that is able to mix and divide the waste?
15. How does the MSW vary seasonally and during holidays?
16. What portion of the waste originates from distant areas due to transfer trailers?
17. How do you unload your trucks?
18. What legal and safety issues need to be cleared up?
19. Do you receive self-hauled garbage?
20. Do you take construction and demolition waste?
21. Will the day of the week significantly affect the waste stream?
22. Do you conduct any material recovery practices?
23. Do you have a waste-to-energy facility?
24. How do you conduct your record-keeping?
25. Are you able to accommodate an area large enough for us to perform the sorts?
26. Do you have room for us to park our transportation?

27. On some evenings we will need to wrap up samples in tarps for overnight storage, and we will also need to store the equipment we use for the following day. Can we safely store the items on the site?
28. Do we need to use respirators? If so, what kinds?
29. What kind of gloves do your workers use/what kind of gloves should we use?
30. Are there any supplies that you are willing to lend us (sorting table, brooms, small tools, etc)?

*specific to each truck

Appendix C. Detailed Results

Participating Facilities

Table C- 1: Bartholomew County Landfill				
Materials	**Total weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Paper	**1382.15**	**31.38**	**28.46**	**34.29**
OCC and Kraft bags	422.89	9.63	8.04	11.23
Newspaper	311.00	7.03	5.51	8.55
Magazines	168.46	3.78	2.74	4.81
High Grade/Office	171.80	3.94	2.90	4.97
Mixed Recyclable Paper (including Books, Boxboard)	44.60	1.01	0.47	1.54
Compostable Paper	127.80	2.89	2.38	3.41
Other Non-recyclable, Non-compostable Paper	135.60	3.10	2.27	3.94
Plastic	**640.31**	**14.62**	**13.10**	**16.15**
#1 PET Non-Deposit Beverage Containers	62.96	1.44	1.07	1.82
#1 PET Deposit Beverage Containers	59.65	1.36	0.64	2.08
#1 PET All Other Containers	14.95	0.34	0.19	0.50
#2 HDPE Containers	59.83	1.37	1.11	1.63
# 6 Styrofoam	45.45	1.03	0.79	1.27
All Other Numbered Containers (#3,4,5,6,7)	36.40	0.83	0.58	1.08
Other Plastic – NOT Numbered	169.61	3.87	3.01	4.74
Film/Wrap/Bags	191.46	4.37	3.81	4.93
Metal	**184.98**	**4.16**	**3.20**	**5.11**
Aluminum Non-Deposit Beverage Containers	29.70	0.68	0.48	0.87
Aluminum Deposit Beverage Containers	6.95	0.16	0.05	0.28
Aluminum All Other Containers	26.10	0.55	0.01	1.09
Other Non-Ferrous Scrap	13.15	0.30	0.01	0.58

Table C- 1: Bartholomew County Landfill				
Materials	**Total weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Ferrous Food & Beverage Containers	77.73	1.78	1.37	2.20
Other Ferrous Scrap	31.35	0.69	0.22	1.16
Glass	**200.65**	**4.63**	**2.77**	**6.50**
Clear	110.65	2.57	1.36	3.78
Green	16.75	0.38	0.04	0.72
Blue	0.00	0.00	0.00	0.00
Brown	73.25	1.68	0.50	2.87
Yard Waste	**411.07**	**9.34**	**6.41**	**12.27**
Food Waste	**615.50**	**14.13**	**11.77**	**16.49**
Wood	**170.25**	**3.69**	**1.77**	**5.62**
Non-Treated Wood	44.80	1.02	0.24	1.80
Treated Wood	125.45	2.68	0.73	4.63
Demolition/Renovation/ Construction Debris	**14.90**	**0.37**	**0.00**	**0.75**
Durables	**172.43**	**4.03**	**1.91**	**6.15**
All Electrical & Household Appliances	54.25	1.25	0.75	1.76
Central Processing Units/Peripherals	12.05	0.28	0.00	0.62
Computer Monitors/TV's	0.00	0.00	0.00	0.00
Cell Phones	0.35	0.01	0.00	0.02
Other (Furniture & Furnishings)	105.78	2.48	0.49	4.48
Textiles & Leathers	**180.10**	**4.13**	**2.95**	**5.31**
Diapers	**140.35**	**3.18**	**1.64**	**4.27**
Rubbers	**13.51**	**0.29**	**0.02**	**0.55**
Household hazardous Materials	**80.03**	**1.73**	**0.46**	**3.01**
Oil Filters	8.45	0.16	0.00	0.44
Paints & Solvents	42.80	0.94	0.00	1.99
Pesticides, Herbicides, Fungicides	8.20	0.16	0.00	0.42

Table C- 1: Bartholomew County Landfill				
Materials	**Total weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Household Cleaners	2.30	0.05	0.01	0.10
Batteries (Lead-Acid)	2.30	0.05	0.01	0.10
Batteries (Other)	4.35	0.09	0.04	0.15
Mercury Containing Products	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	11.63	0.27	0.00	0.62
Sharps	**0.05**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**45.00**	**1.02**	**0.76**	**1.28**
Other-Specify	**145.63**	**3.31**	**1.98**	**4.63**
Total	**4396.91**	**100.00**	**100.00**	**100.00**

Table C- 2: Adams County Transfer Station				
Materials	**Total Weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Paper	**1590.27**	**33.43**	**29.92**	**36.94**
OCC and Kraft bags	522.45	10.99	8.78	13.19
Newspaper	246.96	5.15	3.98	6.31
Magazines	131.96	2.77	2.05	3.49
High Grade/Office	264.05	5.54	4.33	6.76
Mixed Recyclable Paper (including Books, Boxboard)	113.05	2.39	1.80	2.98
Compostable Paper	214.05	4.52	3.72	5.33
Other Non-recyclable, Non-compostable Paper	97.75	2.07	1.33	2.81
Plastic	**796.97**	**16.77**	**15.35**	**18.19**
#1 PET Non-Deposit Beverage Containers	56.60	1.20	0.89	1.51
#1 PET Deposit Beverage Containers	53.90	1.13	0.85	1.42
#1 PET All Other Containers	26.90	0.57	0.45	0.69
#2 HDPE Containers	67.60	1.43	1.18	1.67
# 6 Styrofoam	64.85	1.37	0.98	1.76
All Other Numbered Containers (#3,4,5,6,7)	45.90	0.97	0.82	1.12
Other Plastic – NOT Numbered	212.57	4.44	3.49	5.38
Film/Wrap/Bags	268.65	5.66	5.10	6.22
Metal	**177.05**	**3.71**	**3.28**	**4.15**
Aluminum Non-Deposit Beverage Containers	36.10	0.76	0.61	0.91
Aluminum Deposit Beverage Containers	0.40	0.01	0.00	0.01
Aluminum All Other Containers	8.75	0.19	0.13	0.24
Other Non-Ferrous Scrap	9.55	0.20	0.11	0.29
Ferrous Food & Beverage Containers	81.55	1.72	1.41	2.02

Table C- 2: Adams County Transfer Station				
Materials	**Total Weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Other Ferrous Scrap	40.70	0.84	0.51	1.17
Glass	**151.45**	**3.20**	**2.58**	**3.82**
Clear	86.20	1.83	1.31	2.34
Green	17.10	0.36	0.06	0.66
Blue	1.15	0.02	0.00	0.06
Brown	47.00	0.99	0.56	1.43
Yard Waste	**311.10**	**6.43**	**2.99**	**9.87**
Food Waste	**637.45**	**13.48**	**11.41**	**15.55**
Wood	**114.44**	**2.40**	**0.69**	**4.11**
Non-Treated Wood	2.90	0.06	0.00	0.13
Treated Wood	111.54	2.34	0.68	4.00
Demolition/Renovation/ Construction Debris	**225.00**	**4.60**	**0.19**	**9.00**
Durables	**94.90**	**2.01**	**0.81**	**3.21**
All Electrical & Household Appliances	66.20	1.40	0.65	2.15
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00
Computer Monitors/TV's	27.45	0.58	0.00	1.58
Cell Phones	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	1.25	0.03	0.00	0.07
Textiles & Leathers	**223.85**	**4.70**	**3.58**	**5.82**
Diapers	**230.60**	**4.89**	**3.10**	**6.68**
Rubbers	**12.70**	**0.27**	**0.11**	**0.44**
Household hazardous Materials	**48.15**	**1.00**	**0.36**	**1.64**
Oil Filters	3.40	0.07	0.00	0.19
Paints & Solvents	29.55	0.61	0.03	1.19
Pesticides, Herbicides, Fungicides	0.50	0.01	0.00	0.03
Household Cleaners	1.95	0.04	0.00	0.11

Table C- 2: Adams County Transfer Station				
Materials	**Total Weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00
Batteries (Other)	3.75	0.08	0.04	0.11
Mercury Containing Products	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	9.00	0.19	0.00	0.39
Sharps	**0.65**	**0.01**	**0.00**	**0.02**
Fines/Supermix	**74.75**	**1.57**	**1.26**	**1.89**
Other-Specify	**72.05**	**1.53**	**0.71**	**2.36**
Total	**4761.38**	**100.00**	**100.00**	**100.00**

Table C- 3: Newton County Landfill				
Materials	**Total Weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Paper	**1299.05**	**27.88**	**25.36**	**30.40**
OCC and Kraft bags	500.85	10.76	8.55	12.97
Newspaper	195.45	4.23	3.32	5.14
Magazines	76.60	1.66	1.02	2.31
High Grade/Office	233.85	4.98	3.29	6.68
Mixed Recyclable Paper (including Books, Boxboard)	48.50	1.05	0.84	1.25
Compostable Paper	223.00	4.76	3.93	5.59
Other Non-recyclable, Non-compostable Paper	20.80	0.43	0.25	0.61
Plastic	**814.69**	**17.27**	**14.78**	**19.75**
#1 PET Non-Deposit Beverage Containers	59.35	1.22	0.07	2.36
#1 PET Deposit Beverage Containers	42.35	0.91	0.65	1.16
#1 PET All Other Containers	45.45	0.94	0.00	1.98
#2 HDPE Containers	80.49	1.69	1.36	2.02
# 6 Styrofoam	27.45	0.59	0.35	0.83
All Other Numbered Containers (#3,4,5,6,7)	35.20	0.72	0.30	1.13
Other Plastic – NOT Numbered	280.90	6.03	4.64	7.42
Film/Wrap/Bags	243.50	5.19	4.42	5.95
Metal	**307.50**	**6.67**	**4.56**	**8.77**
Aluminum Non-Deposit Beverage Containers	18.10	0.39	0.27	0.52
Aluminum Deposit Beverage Containers	3.90	0.08	0.03	0.14
Aluminum All Other Containers	2.70	0.06	0.00	0.11
Other Non-Ferrous Scrap	21.05	0.46	0.21	0.70
Ferrous Food & Beverage Containers	56.80	1.19	0.63	1.74

Table C- 3: Newton County Landfill				
Materials	**Total Weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Other Ferrous Scrap	204.95	4.49	2.33	6.64
Glass	**96.89**	**2.11**	**1.52**	**2.70**
Clear	59.61	1.30	0.85	1.75
Green	11.95	0.26	0.12	0.40
Blue	0.00	0.00	0.00	0.00
Brown	25.33	0.55	0.38	0.72
Yard Waste	**316.10**	**6.75**	**3.65**	**9.85**
Food Waste	**365.35**	**7.70**	**5.46**	**9.93**
Wood	**410.34**	**8.85**	**6.58**	**11.12**
Non-Treated Wood	62.35	1.38	0.00	3.02
Treated Wood	347.99	7.47	5.84	9.11
Demolition/Renovation/ Construction Debris	**338.45**	**7.23**	**4.49**	**9.96**
Durables	**169.61**	**3.62**	**1.61**	**5.64**
All Electrical & Household Appliances	36.30	0.78	0.33	1.24
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	133.31	2.84	0.93	4.74
Textiles & Leathers	**271.40**	**5.85**	**4.23**	**7.46**
Diapers	**118.20**	**2.60**	**1.52**	**3.68**
Rubbers	**42.47**	**0.88**	**0.29**	**1.47**
Household hazardous Materials	**9.60**	**0.21**	**0.06**	**0.37**
Oil Filters	2.65	0.06	0.00	0.12
Paints & Solvents	4.95	0.11	0.00	0.24
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00

Table C- 3: Newton County Landfill				
Materials	**Total Weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00
Batteries (Other)	1.85	0.04	0.01	0.07
Mercury Containing Products	0.15	0.00	0.00	0.01
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00
Sharps	**0.25**	**0.01**	**0.00**	**0.01**
Fines/Supermix	**85.59**	**1.86**	**1.31**	**2.41**
Other-Specify	**24.95**	**0.53**	**0.21**	**0.86**
Total	**4670.43**	**100.00**	**100.00**	**100.00**

Table C- 4: Daviess County Landfill				
Materials	**Total Weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Paper	**1338.47**	**29.29**	**27.08**	**31.51**
OCC and Kraft bags	478.38	10.48	8.33	12.64
Newspaper	170.13	3.71	2.94	4.48
Magazines	95.30	2.07	1.48	2.67
High Grade/Office	212.91	4.66	3.93	5.39
Mixed Recyclable Paper (including Books, Boxboard)	79.55	1.75	1.53	1.97
Compostable Paper	245.93	5.39	4.51	6.26
Other Non-recyclable, Non-compostable Paper	56.27	1.23	0.90	1.56
Plastic	**748.28**	**16.45**	**15.06**	**17.84**
#1 PET Non-Deposit Beverage Containers	53.71	1.19	0.86	1.51
#1 PET Deposit Beverage Containers	52.43	1.15	0.92	1.38
#1 PET All Other Containers	32.15	0.71	0.56	0.86
#2 HDPE Containers	98.47	2.18	1.76	2.61
# 6 Styrofoam	39.44	0.87	0.76	0.97
All Other Numbered Containers (#3,4,5,6,7)	44.07	0.97	0.74	1.20
Other Plastic – NOT Numbered	188.68	4.14	3.34	4.95
Film/Wrap/Bags	239.33	5.24	4.73	5.75
Metal	**239.18**	**5.24**	**4.18**	**6.30**
Aluminum Non-Deposit Beverage Containers	28.58	0.62	0.45	0.80
Aluminum Deposit Beverage Containers	13.48	0.29	0.20	0.38
Aluminum All Other Containers	5.45	0.12	0.06	0.18
Other Non-Ferrous Scrap	22.55	0.50	0.16	0.84
Ferrous Food & Beverage Containers	65.67	1.45	1.18	1.72

Table C- 4: Daviess County Landfill				
Materials	**Total Weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Other Ferrous Scrap	103.45	2.26	1.34	3.17
Glass	**217.11**	4.79	**3.91**	**5.67**
Clear	124.23	2.74	2.09	3.38
Green	10.83	0.24	0.07	0.41
Blue	0.00	0.00	0.00	0.00
Brown	82.05	1.82	1.31	2.33
Yard Waste	**278.53**	**6.10**	**3.76**	**8.44**
Food Waste	**634.38**	**13.84**	**11.85**	**15.83**
Wood	**97.23**	**2.11**	**1.24**	**2.98**
Non-Treated Wood	5.15	0.11	0.01	0.21
Treated Wood	92.08	2.00	1.13	2.87
Demolition/Renovation/ Construction Debris	**105.75**	**2.43**	**0.58**	**4.28**
Durables	**142.04**	**3.15**	**0.82**	**5.47**
All Electrical & Household Appliances	63.84	1.45	0.49	2.42
Central Processing Units/Peripherals	48.05	1.05	0.00	2.22
Computer Monitors/TV's	29.25	0.62	0.00	1.69
Cell Phones	0.25	0.01	0.00	0.01
Other (Furniture & Furnishings)	0.65	0.01	0.00	0.04
Textiles & Leathers	**356.13**	**7.86**	**6.37**	**9.35**
Diapers	**249.24**	**5.52**	**3.37**	**7.67**
Rubbers	**18.23**	**0.40**	**0.00**	**0.82**
Household hazardous Materials	**39.10**	**0.84**	**0.37**	**1.30**
Oil Filters	1.60	0.04	0.00	0.10
Paints & Solvents	14.40	0.31	0.07	0.55
Pesticides, Herbicides, Fungicides	7.90	0.17	0.00	0.47
Household Cleaners	1.75	0.04	0.00	0.08

Table C- 4: Daviess County Landfill				
Materials	**Total Weight(lb)**	**Mean (%)**	**Lower bound (%)**	**Upper bound (%)**
Batteries (Lead-Acid)	0.90	0.02	0.00	0.04
Batteries (Other)	0.90	0.02	0.01	0.03
Mercury Containing Products	0.35	0.01	0.00	0.02
Other (HHM Containers with Product Inside)	11.30	0.24	0.00	0.61
Sharps	**1.55**	**0.03**	**0.00**	**0.06**
Fines/Supermix	**43.45**	**0.96**	**0.71**	**1.21**
Other-Specify	**44.65**	**0.98**	**0.58**	**1.39**
Total	**4553.32**	**100.00**	**100.00**	**100.00**

Table C- 5: Statewide MSW Annual Tonnage for Different Origins					
Materials	**Urban**	**Suburban**	**Rural**	**U/S**	**S/R**
Paper	**1,042,983**	**170,064**	**268,941**	**90,111**	**173,223**
OCC and Kraft bags	402,630	52,212	92,056	31,015	56,237
Newspaper	158,226	38,091	37,967	17,119	31,628
Magazines	62,284	20,462	20,780	8,273	17,114
High Grade/Office	186,480	21,343	43,736	13,568	24,954
Mixed Recyclable Paper (including Books, Boxboard)	39,133	5,451	17,756	3,120	8,494
Compostable Paper	178,058	15,676	42,500	11,636	21,670
Other Non-recyclable, Non-compostable Paper	16,172	16,830	14,144	5,379	13,127
Plastic	**645,944**	**79,264**	**142,451**	**48,496**	**86,243**
#1 PET Non-Deposit Beverage Containers	45,571	7,828	10,256	4,049	7,290
#1 PET Deposit Beverage Containers	33,884	7,369	9,786	3,445	6,904
#1 PET All Other Containers	34,988	1,863	5,485	1,945	2,715
#2 HDPE Containers	63,159	7,424	15,482	4,650	8,766
# 6 Styrofoam	22,136	5,586	9,592	2,467	5,934
All Other Numbered Containers (#3,4,5,6,7)	26,782	4,511	8,329	2,354	4,980
Other Plastic – NOT Numbered	225,438	21,000	36,796	15,056	22,545
Film/Wrap/Bags	193,986	23,684	46,724	14,530	27,108
Metal	**249,360**	**22,532**	**38,390**	**16,458**	**23,838**
Aluminum Non-Deposit Beverage Containers	14,764	3,678	5,925	1,632	3,781
Aluminum Deposit Beverage Containers	3,158	879	1,298	375	866
Aluminum All Other Containers	2,200	2,981	1,299	926	1,937
Other Non-Ferrous Scrap	17,037	1,604	2,993	1,143	1,781
Ferrous Food & Beverage Containers	44,404	9,656	13,586	4,514	9,293
Other Ferrous Scrap	167,797	3,734	13,289	7,869	6,181
Glass	**78,816**	**25,106**	**34,261**	**10,248**	**23,820**
Clear	48,548	13,920	19,560	5,879	13,389

Table C- 5: Statewide MSW Annual Tonnage for Different Origins					
Materials	**Urban**	**Suburban**	**Rural**	**U/S**	**S/R**
Green	9,683	2,073	2,551	975	1,877
Blue	-	-	101	-	33
Brown	20,584	9,113	12,049	3,394	8,522
Yard Waste	**252,445**	**50,623**	**53,729**	**24,465**	**43,087**
Food Waste	**287,932**	**76,580**	**117,132**	**33,190**	**76,723**
Wood	**331,204**	**20,026**	**19,349**	**19,082**	**16,432**
Non-Treated Wood	51,698	5,509	737	3,647	3,044
Treated Wood	279,506	14,518	18,612	15,435	13,388
Demolition/Renovation/ Construction Debris	**270,300**	**1,980**	**30,129**	**11,543**	**10,710**
Durables	**135,549**	**21,819**	**22,095**	**11,632**	**18,229**
All Electrical & Household Appliances	29,351	6,795	12,231	3,100	7,400
Central Processing Units/Peripherals	-	1,513	4,514	425	2,224
Computer Monitors/TV's	-	-	5,152	-	1,659
Cell Phones	-	44	24	12	30
Other (Furniture & Furnishings)	106,199	13,466	174	8,095	6,916
Textiles & Leathers	**218,686**	**22,366**	**53,846**	**15,165**	**28,730**
Diapers	**97,202**	**17,220**	**44,639**	**8,782**	**23,144**
Rubbers	**32,856**	**1,550**	**2,889**	**1,770**	**1,720**
Household hazardous Materials	**7,875**	**9,400**	**7,865**	**2,957**	**7,321**
Oil Filters	2,244	880	458	338	596
Paints & Solvents	3,974	5,106	3,936	1,594	3,868
Pesticides, Herbicides, Fungicides	-	862	775	242	689
Household Cleaners	-	290	349	81	260
Batteries (Lead-Acid)	-	288	84	81	174
Batteries (Other)	1,545	514	419	207	397
Mercury Containing Products	113	-	33	5	11
Other (HHM Containers with Product Inside)	-	1,460	1,811	410	1,327

Table C- 5: Statewide MSW Annual Tonnage for Different Origins					
Materials	**Urban**	**Suburban**	**Rural**	**U/S**	**S/R**
Sharps	**207**	**6**	**199**	**10**	**67**
Fines/Supermix	**69,671**	**5,550**	**10,864**	**4,389**	**6,325**
Other-Specify	**19,996**	**17,936**	**10,774**	**5,845**	**12,606**
Total	**3,741,026**	**542,022**	**857,552**	**304,143**	**552,217**

Table C- 6: Statewide MSW Annual Tonnage Imported to IN					
Materials	**IL**	**OH**	**MI**	**KY**	**Other**
Paper	**596,525**	**50,924**	**19,265**	**29,868**	**205**
OCC and Kraft bags	249,752	17,431	7,437	9,697	67
Newspaper	69,576	7,189	2,923	5,454	37
Magazines	40,173	3,935	1,150	2,951	20
High Grade/Office	23,947	8,282	3,444	4,303	30
Mixed Recyclable Paper (including Books, Boxboard)	69,521	3,362	723	1,465	10
Compostable Paper	75,020	8,048	3,289	3,736	26
Other Non-recyclable, Non-compostable Paper	68,537	2,678	299	2,263	16
Plastic	**328,133**	**26,973**	**11,931**	**14,871**	**102**
#1 PET Non-Deposit Beverage Containers	24,365	1,942	842	1,257	9
#1 PET Deposit Beverage Containers	1,963	1,853	626	1,191	8
#1 PET All Other Containers	-	1,039	646	468	3
#2 HDPE Containers	26,568	2,932	1,167	1,512	10
# 6 Styrofoam	19,371	1,816	409	1,023	7
All Other Numbered Containers (#3,4,5,6,7)	19,663	1,577	495	859	6
Other Plastic – NOT Numbered	127,356	6,967	4,164	3,887	27
Film/Wrap/Bags	108,848	8,847	3,583	4,674	32
Metal	**121,288**	**7,269**	**4,606**	**4,110**	**28**
Aluminum Non-Deposit Beverage Containers	-	1,122	273	652	4
Aluminum Deposit Beverage Containers	9,620	246	58	149	1
Aluminum All Other Containers	11,840	246	41	334	2
Other Non-Ferrous Scrap	25,747	567	315	307	2
Ferrous Food & Beverage Containers	23,831	2,572	820	1,602	11

Table C- 6: Statewide MSW Annual Tonnage Imported to IN					
Materials	**IL**	**OH**	**MI**	**KY**	**Other**
Other Ferrous Scrap	50,250	2,516	3,099	1,066	7
Glass	**71,738**	**6,487**	**1,456**	**4,107**	**28**
Clear	66,664	3,704	897	2,309	16
Green	-	483	179	324	2
Blue	-	19	-	6	0
Brown	5,073	2,281	380	1,469	10
Yard Waste	**63,657**	**10,174**	**4,663**	**7,429**	**51**
Food Waste	**304,744**	**22,179**	**5,318**	**13,229**	**91**
Wood	**229,382**	**3,664**	**6,118**	**2,833**	**19**
Non-Treated Wood	98,538	140	955	525	4
Treated Wood	130,844	3,524	5,163	2,308	16
Demolition/Renovation/ Construction Debris	**180,041**	**5,705**	**4,993**	**1,847**	**13**
Durables	**53,154**	**4,184**	**2,504**	**3,143**	**22**
All Electrical & Household Appliances	447	2,316	542	1,276	9
Central Processing Units/Peripherals	-	855	-	384	3
Computer Monitors/TV's	32,284	975	-	286	2
Cell Phones	-	5	-	5	0
Other (Furniture & Furnishings)	20,423	33	1,962	1,192	8
Textiles & Leathers	**174,846**	**10,196**	**4,039**	**4,954**	**34**
Diapers	**49,922**	**8,452**	**1,795**	**3,991**	**27**
Rubbers	**4,876**	**547**	**607**	**297**	**2**
Household hazardous Materials	**10,051**	**1,489**	**145**	**1,262**	**9**
Oil Filters	2,057	87	41	103	1
Paints & Solvents	2,247	745	73	667	5
Pesticides, Herbicides, Fungicides	20	147	-	119	1
Household Cleaners	-	66	-	45	0
Batteries (Lead-Acid)	66	16	-	30	0

Table C- 6: Statewide MSW Annual Tonnage Imported to IN					
Materials	**IL**	**OH**	**MI**	**KY**	**Other**
Batteries (Other)	1,072	79	29	68	0
Mercury Containing Products	7	10	-	0	1
Other (HHM Containers with Product Inside)	4,581	343	-	229	2
Sharps	**494**	**38**	**4**	**12**	**0**
Fines/Supermix	**21,478**	**2,057**	**1,287**	**1,091**	**7**
Other-Specify	**65,848**	**2,040**	**369**	**2,174**	**15**
Total	**2,276,210***	**162,379**	**69,099**	**95,217**	**653**

***Rounding difference of 32.57 noted in final total*

Table C- 7: Comparison of IN Results with Other States (*mixed MSW)*										
Material Category	**IN12**	**IL09**	**IA06**	**IA98**	**PA03**	**WI03**	**MN00**	**CA04**	**GA05**	**DE07**
PAPER	**29.1**	**26.2**	**33.0**	**32.2**	**33.3**	**20.8**	**34.3**	**21.0**	**38.7**	**32.5**
OCC and Kraft Bags	10.6	11.0	8.5	8.5	8.4	4.9	9.4	6.7	11.0	10.1
Newspaper	4.7	3.1	4.0	3.3	4.2	1.9	4.1	2.2	4.8	4.5
Magazines	2.1	1.8	1.8	2.5	2.7	1.0	2.5	0.8	2.6	2.1
High Grade/Office	4.8	1.1	2.5	2.3	3.7	1.4	3.1	1.2	3.4	2.2
Mixed Recyclable Paper	1.2	3.1	7.0	5.4	4.6	4.2	6.0	0.7	3.0	3.7
Compostable Paper	4.5	3.3	6.5	0.0	0.5	4.8	0.0	0.0	3.4	7.5
Other Non-Recyclable, Non-Compostable Paper	1.1	3.0	2.8	10.3	9.3	2.5	9.2	9.4	10.5	2.3
PLASTICS	**16.7**	**14.4**	**14.9**	**14.4**	**11.3**	**10.5**	**11.4**	**9.5**	**15.8**	**13.7**
Film/Wrap/Bags	3.1	1.2	0.9	0.3	0.9	0.4	0.7	0.5	1.3	1.2
#1 PET Bottles/Jars	1.7	1.2	1.0	1.1	0.7	0.4	0.5	0.5	1.1	0.8
#2 HDPE Bottles/Jars	1.5	1.7	0.4	0.8	0.9	0.5	1.3	0.0	1.6	1.0
All other Numbered Containers (#3,4,5,6,7)	5.3	5.6	6.0	7.5	3.8	5.2	5.0	4.1	4.4	5.4
Remainder/Composite and other Plastic	5.1	4.8	6.6	4.8	5.0	4.0	3.8	4.3	7.4	5.3
METALS	**5.8**	**5.3**	**4.7**	**6.0**	**5.4**	**6.3**	**5.1**	**6.2**	**5.4**	**4.8**
Aluminum Beverage Containers	0.6	0.4	0.1	0.1	0.5	0.3	0.7	0.2	0.7	0.5
Aluminum All other Containers	0.2	0.5	0.3	0.1	0.5	0.3	0.5	0.0	0.0	0.5
Ferrous Food & Beverage Containers	0.4	0.2	0.5	0.7	1.4	1.5	0.1	0.3	0.7	0.6
Other Ferrous Scrap	1.4	1.0	1.0	1.7	0.0	0.5	0.9	0.8	1.3	1.0
Other Non-Ferrous Scrap	3.3	3.1	2.8	3.4	3.0	3.6	2.9	4.9	2.6	2.2
GLASS	**2.9**	**3.2**	**1.7**	**2.6**	**3.0**	**2.3**	**2.8**	**2.3**	**3.7**	**2.6**
Clear Bottles	1.7	2.9	0.7	1.0	1.4	0.9	1.3	0.9	1.7	1.3
Green Bottles	0.3	0.0	0.1	0.1	0.4	0.0	0.3	0.4	0.4	0.4
Brown Bottles	0.9	0.0	0.0	0.2	0.7	0.0	0.4	0.3	1.2	0.5
Other glass	0.0	0.2	0.9	1.4	0.5	1.4	0.7	0.7	0.4	0.4
WOOD	**6.8**	**10.1**	**8.0**	**6.4**	**8.3**	**13.7**	**7.5**	**9.6**	**4.4**	**5.6**

Table C- 7: Comparison of IN Results with Other States (*mixed MSW)*										
Material Category	**IN12**	**IL09**	**IA06**	**IA98**	**PA03**	**WI03**	**MN00**	**CA04**	**GA05**	**DE07**
Non-treated Wood	1.1	4.3	3.4	2.8	5.8	12.8	1.9	0.0	1.9	1.6
Treated Wood	5.7	5.7	4.6	3.6	2.5	0.9	5.6	9.6	2.5	4.0
ORGANIC	**28.1**	**30.1**	**22.4**	**24.9**	**25.9**	**21.0**	**21.6**	**30.9**	**25.5**	**32.6**
Food Waste	7.1	2.8	1.6	1.7	5.2	1.3	2.3	6.9	2.7	8.8
Yard Waste	9.9	13.4	10.6	10.7	12.0	10.2	12.4	14.6	12.0	12.7
Textiles and Leather	5.6	7.7	4.9	4.2	3.8	2.4	2.7	2.4	4.0	4.6
Diapers	3.2	2.2	2.4	2.3	2.3	1.8	2.1	0.0	2.5	1.5
Rubber	0.7	0.2	0.5	0.8	1.7	0.6	0.8	0.3	0.2	1.4
Fines /Mixed-Residue	1.6	3.8	2.4	5.2	1.0	4.6	1.4	6.8	4.1	3.6
INORGANIC	**8.9**	**10.2**	**10.6**	**8.6**	**10.2**	**24.7**	**10.4**	**17.8**	**6.1**	**7.8**
Demolition/ Renovation/ Construction Debris	5.4	7.9	5.5	4.8	5.8	16.6	2.8	9.6	2.0	4.5
Electronics	1.2	1.4	2.4	1.6	1.5	2.7	1.8	2.7	2.7	1.6
Furniture & Furnishing	2.2	0.9	2.7	2.2	2.9	5.4	5.8	5.4	1.4	1.8
SPECIAL	**1.7**	**0.5**	**4.8**	**4.9**	**2.5**	**0.8**	**7.0**	**2.7**	**0.4**	**0.4**
Lead Acid Batteries	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Other Batteries	0.1	0.0	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0
Other Hazardous	0.5	0.4	4.1	4.8	0.3	0.6	1.1	1.5	0.4	0.2
Other-Specify	1.1	0.0	0.5	0.0	2.2	0.0	5.8	1.1	0.0	0.0
SUM	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Appendix D. Data for All Waste Sorts

Table D-1 Bartholomew County Landfill Data

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#1 (08/18/08-08/23/08		#2(08/18/08-08/23/08)		#3(09/13/08-09/15/08)	
Weather	**77°F,sunny**		**77°F,sunny**		**74°F,cloudy**	
Origin	**N/A**		**N/A**		**N/A**	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**41.38**		**33.53**		**36.50**
OCC and Kraft bags	34.90	15.80	23.90	10.64	19.45	8.79
Newspaper	1.00	0.45	20.00	8.90	17.65	7.98
Magazines	10.55	4.78	8.35	3.72	14.25	6.44
High Grade/Office	20.30	9.19	5.30	2.36	13.70	6.19
Mixed Recyclable Paper (including Books, Boxboard)	11.90	5.39	2.15	0.96	3.45	1.56
Compostable Paper	10.65	4.82	13.40	5.97	9.20	4.16
Other Non-recyclable, Non-compostable Paper	2.10	0.95	2.20	0.98	3.05	1.38
Plastic		**20.83**		**19.81**		**11.05**
#1 PET Non-Deposit Beverage Containers	7.55	3.42	4.65	2.07	0.20	0.09
#1 PET Deposit Beverage Containers	18.80	8.51	5.10	2.27	2.10	0.95
#1 PET All Other Containers	0.70	0.32	1.15	0.51	0.65	0.29
#2 HDPE Containers	0.30	0.14	5.20	2.32	2.25	1.02
# 6 Styrofoam	1.75	0.79	2.65	1.18	1.50	0.68
All Other Numbered Containers (#3,4,5,6,7)	1.30	0.59	0.55	0.24	0.55	0.25
Other Plastic – NOT Numbered	5.40	2.45	13.35	5.94	8.05	3.64
Film/Wrap/Bags	10.20	4.62	11.85	5.28	9.15	4.14
Metal		**2.81**		**4.50**		**3.37**
Aluminum Non-Deposit Beverage Containers	3.10	1.40	3.30	1.47	1.85	0.84
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.00	0.00
Aluminum All Other Containers	0.20	0.09	0.50	0.22	0.35	0.16
Other Non-Ferrous Scrap	1.40	0.63	0.00	0.00	0.00	0.00
Ferrous Food & Beverage Containers	1.30	0.59	5.80	2.58	5.25	2.37
Other Ferrous Scrap	0.20	0.09	0.50	0.22	0.00	0.00
Glass		**3.24**		**4.34**		**0.47**
Clear	6.90	3.12	9.75	4.34	1.05	0.47
Green	0.00	0.00	0.00	0.00	0.00	0.00

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#1 (08/18/08-08/23/08		#2(08/18/08-08/23/08)		#3(09/13/08-09/15/08)	
Weather	**77°F,sunny**		**77°F,sunny**		**74°F,cloudy**	
Origin	**N/A**		**N/A**		**N/A**	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.25	0.11	0.00	0.00	0.00	0.00
Yard Waste	**13.85**	**6.27**	**0.35**	**0.16**	**45.20**	**20.43**
Food Waste	**6.65**	**3.01**	**31.15**	**13.87**	**35.15**	**15.89**
Wood		**7.58**		**3.74**		**0.00**
Non-Treated Wood	16.70	7.56	5.15	2.29	0.00	0.00
Treated Wood	0.05	0.02	3.25	1.45	0.00	0.00
Demolition/Renovation/ Construction Debris	**0.00**	**0.00**	**0.50**	**0.22**	**0.00**	**0.00**
Durables		**0.00**		**0.00**		**5.11**
All Electrical & Household Appliances	0.00	0.00	0.00	0.00	0.85	0.38
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	7.90	3.57
Computer Monitors/TV's		0.00	0.00	0.00	0	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	2.55	1.15
Textiles & Leathers	**0.60**	**0.27**	**7.8**	**3.47**	**3.35**	**1.51**
Diapers	**0.05**	**0.02**	**27.85**	**12.40**	**5.70**	**2.58**
Rubbers	**0.005**	**0.00**	**0.05**	**0.02**	**0**	**0.00**
Household hazardous Materials		**12.02**		**0.00**		**0.20**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	26.55	12.02	0.00	0.00	0	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.00	0.00	0.25	0.11
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.20	0.09
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**3.15**	**1.43**		**0.00**	**1.75**	**0.79**
Other-Specify	**2.50**	**1.13**	**8.85**	**3.94**	**4.65**	**2.10**
Total	**220.86**	**100.00**	**224.60**	**100.00**	**221.25**	**100.00**

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#4(09/25/08-09/27/08)		#5(09/25/08-09/27/08)		#6(10/03/08-10/05/08)	
Weather	70°F,sunny		70°F,sunny		63°F,sunny	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**34.17**		**29.67**		**35.63**
OCC and Kraft bags	17.40	7.62	10.10	4.64	11.35	5.51
Newspaper	15.35	6.73	13.45	6.18	16.95	8.23
Magazines	14.10	6.18	8.15	3.75	7.05	3.42
High Grade/Office	8.55	3.75	5.30	2.44	16.75	8.14
Mixed Recyclable Paper (including Books, Boxboard)	6.75	2.96	0.00	0.00	2.35	1.14
Compostable Paper	2.95	1.29	6.25	2.87	7.30	3.55
Other Non-recyclable, Non-compostable Paper	12.90	5.65	21.30	9.79	11.60	5.64
Plastic		**11.81**		**15.93**		**16.57**
#1 PET Non-Deposit Beverage Containers	2.00	0.88	2.10	0.97	2.30	1.12
#1 PET Deposit Beverage Containers	3.45	1.51	4.20	1.93	3.60	1.75
#1 PET All Other Containers	1.20	0.53	1.75	0.80	3.00	1.46
#2 HDPE Containers	2.55	1.12	2.95	1.36	6.10	2.96
# 6 Styrofoam	1.45	0.64	2.55	1.17	1.85	0.90
All Other Numbered Containers (#3,4,5,6,7)	1.75	0.77	6.45	2.96	2.50	1.21
Other Plastic – NOT Numbered	6.35	2.78	3.70	1.70	4.00	1.94
Film/Wrap/Bags	8.20	3.59	10.95	5.03	10.75	5.22
Metal		**1.73**		**3.33**		**2.48**
Aluminum Non-Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.10	0.05
Aluminum Deposit Beverage Containers	1.75	0.77	1.25	0.57	1.40	0.68
Aluminum All Other Containers	0.85	0.37	0.90	0.41	0.25	0.12
Other Non-Ferrous Scrap	0.00	0.00	0.00	0.00	0.00	0.00
Ferrous Food & Beverage Containers	1.30	0.57	5.10	2.34	3.20	1.55
Other Ferrous Scrap	0.05	0.02	0.00	0.00	0.15	0.07
Glass		**1.01**		**10.78**		**1.85**
Clear	2.05	0.90	8.60	3.95	3.45	1.68
Green	0.00	0.00	7.60	3.49	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.25	0.11	7.25	3.33	0.35	0.17
Yard Waste	**57.75**	**25.30**	**13.60**	**6.25**	**11.52**	**5.60**
Food Waste	**17.70**	**7.75**	**44.95**	**20.66**	**37.70**	**18.31**
Wood		**0.55**		**5.58**		**0.70**
Non-Treated Wood	1.25	0.55	12.15	5.58	0.00	0.00

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#4(09/25/08-09/27/08)		#5(09/25/08-09/27/08)		#6(10/03/08-10/05/08)	
Weather	70°F,sunny		70°F,sunny		63°F,sunny	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Treated Wood	0.00	0.00	0	0.00	1.45	0.70
Demolition/Renovation/ Construction Debris	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Durables		**1.29**		**0.00**		**2.23**
All Electrical & Household Appliances	2.90	1.27	0.00	0.00	0.30	0.15
Central Processing Units/Peripherals	0.05	0.02	0.00	0.00	4.10	1.99
Computer Monitors/TV's	0	0.00	0.00	0.00	0	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.20	0.10
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**7.70**	**3.37**	**4.25**	**1.95**	**10.85**	**5.27**
Diapers	**10.50**	**4.60**	**5.6**	**2.57**	**10.70**	**5.20**
Rubbers	**0.05**	**0.02**	**0.00**	**0.00**	**1.3**	**0.63**
Household hazardous Materials		**2.21**		**0.30**		**0.60**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	4.9	2.15	0.00	0.00	0	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.25	0.12
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.15	0.07	0.15	0.07	0.70	0.34
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.50	0.23	0.28	0.14
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**4.8**	**2.10**		**0.00**	**3.1**	**1.51**
Other-Specify	**9.30**	**4.07**	**6.45**	**2.96**	**7.05**	**3.42**
Total	**228.25**	**100.00**	**217.55**	**100.00**	**205.85**	**100.00**

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#7(10/03/08-10/05/08)		#8(10/03/08-10/05/08)		#9(10/25/08)	
Weather	63°F,sunny		63°F,sunny		49°F,sunny	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**40.32**		**23.28**		**27.45**
OCC and Kraft bags	35.30	15.68	12.90	6.01	13.80	6.10
Newspaper	26.85	11.93	4.45	2.07	20.70	9.14
Magazines	5.20	2.31	4.30	2.00	9.45	4.17
High Grade/Office	4.60	2.04	11.80	5.50	3.55	1.57
Mixed Recyclable Paper (including Books, Boxboard)	6.55	2.91	0.15	0.07	1.30	0.57
Compostable Paper	5.85	2.60	9.25	4.31	7.10	3.14
Other Non-recyclable, Non-compostable Paper	6.40	2.84	7.10	3.31	6.25	2.76
Plastic		**20.17**		**18.64**		**11.93**
#1 PET Non-Deposit Beverage Containers	1.45	0.64	7.55	3.52	1.55	0.68
#1 PET Deposit Beverage Containers	3.05	1.35	6.45	3.01	1.75	0.77
#1 PET All Other Containers	1.45	0.64	2.40	1.12	0.45	0.20
#2 HDPE Containers	3.15	1.40	1.85	0.86	3.40	1.50
# 6 Styrofoam	3.20	1.42	2.80	1.30	2.55	1.13
All Other Numbered Containers (#3,4,5,6,7)	3.05	1.35	2.40	1.12	2.10	0.93
Other Plastic – NOT Numbered	18.50	8.22	6.00	2.80	3.30	1.46
Film/Wrap/Bags	11.55	5.13	10.55	4.92	11.90	5.26
Metal		**6.42**		**5.14**		**4.33**
Aluminum Non-Deposit Beverage Containers	0.85	0.38	2.30	1.07	3.00	1.33
Aluminum Deposit Beverage Containers	0.80	0.36	0.00	0.00	0.00	0.00
Aluminum All Other Containers	0.20	0.09	0.55	0.26	0.65	0.29
Other Non-Ferrous Scrap	7.30	3.24	1.75	0.82	0.10	0.04
Ferrous Food & Beverage Containers	3.75	1.67	5.98	2.79	6.05	2.67
Other Ferrous Scrap	1.55	0.69	0.45	0.21	0.00	0.00
Glass		**2.20**		**7.95**		**16.30**
Clear	3.60	1.60	11.85	5.52	4.05	1.79
Green	0.40	0.18	0.00	0.00	2.75	1.21
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.95	0.42	5.20	2.42	30.10	13.30
Yard Waste	**3.05**	**1.35**	**11.05**	**5.15**	**1.80**	**0.80**

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#7(10/03/08-10/05/08)		#8(10/03/08-10/05/08)		#9(10/25/08)	
Weather	63°F,sunny		63°F,sunny		49°F,sunny	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**22.25**	**9.88**	**27.20**	**12.68**	**17.05**	**7.53**
Wood		**1.49**		**3.31**		**0.33**
Non-Treated Wood	0.00	0.00	0.00	0.00	0.60	0.27
Treated Wood	3.35	1.49	7.10	3.31	0.15	0.07
Demolition/Renovation/ Construction Debris	**1.10**	**0.49**	**0.00**	**0.00**	**0.25**	**0.11**
Durables		**1.55**		**2.49**		**2.12**
All Electrical & Household Appliances	3.35	1.49	0.00	0.00	2.25	0.99
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0	0.00
Cell Phones	0.15	0.07	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	5.35	2.49	2.55	1.13
Textiles & Leathers	**15.95**	**7.09**	**9.75**	**4.54**	**26.15**	**11.55**
Diapers	**7.45**	**3.31**	**24.95**	**11.63**	**1.65**	**0.73**
Rubbers	**0.00**	**0.00**	**0.90**	**0.42**	**0**	**0.00**
Household hazardous Materials		**0.16**		**0.49**		**0.00**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0.00	0.00	0	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.05	0.02	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.20	0.09	0.00	0.00
Batteries (Other)	0.30	0.13	0.05	0.02	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.80	0.37	0.00	0.00
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.02**
Fines/Supermix	**2.75**	**1.22**	**5.00**	**2.33**	**3.6**	**1.59**
Other-Specify	**9.8**	**4.35**	**4.20**	**1.96**	**34.45**	**15.22**
Total	**225.10**	**100.00**	**214.58**	**100.00**	**226.40**	**100.00**

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#10(10/31/08)		#11(10/31/08)		#12(10/31/08)	
Weather	sunny		sunny		sunny	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**35.59**		**42.57**		**28.37**
OCC and Kraft bags	15.85	7.28	19.35	9.11	21.45	9.98
Newspaper	22.00	10.11	27.85	13.12	19.55	9.10
Magazines	10.50	4.83	7.05	3.32	6.10	2.84
High Grade/Office	8.90	4.09	21.70	10.22	3.40	1.58
Mixed Recyclable Paper (including Books, Boxboard)	0.65	0.30	2.05	0.97	0.05	0.02
Compostable Paper	7.25	3.33	5.35	2.52	4.00	1.86
Other Non-recyclable, Non-compostable Paper	12.30	5.65	7.05	3.32	6.40	2.98
Plastic		**15.76**		**13.73**		**11.87**
#1 PET Non-Deposit Beverage Containers	2.95	1.36	2.15	1.01	3.80	1.77
#1 PET Deposit Beverage Containers	1.50	0.69	0.85	0.40	1.70	0.79
#1 PET All Other Containers	0.60	0.28	0.20	0.09	0.00	0.00
#2 HDPE Containers	2.50	1.15	3.00	1.41	4.15	1.93
# 6 Styrofoam	6.55	3.01	1.50	0.71	1.00	0.47
All Other Numbered Containers (#3,4,5,6,7)	3.30	1.52	1.25	0.59	2.35	1.09
Other Plastic – NOT Numbered	6.45	2.96	12.40	5.84	6.50	3.03
Film/Wrap/Bags	10.45	4.80	7.80	3.67	6.00	2.79
Metal		**4.55**		**4.03**		**5.24**
Aluminum Non-Deposit Beverage Containers	3.15	1.45	2.05	0.97	1.00	0.47
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.00	0.00
Aluminum All Other Containers	0.45	0.21	0.00	0.00	0.00	0.00
Other Non-Ferrous Scrap	0.00	0.00	0.80	0.38	0.65	0.30
Ferrous Food & Beverage Containers	6.20	2.85	5.70	2.68	6.05	2.82
Other Ferrous Scrap	0.10	0.05	0.00	0.00	3.55	1.65
Glass		**1.22**		**3.23**		**3.05**
Clear	1.25	0.57	4.75	2.24	2.05	0.95
Green	0.95	0.44	0.00	0.00	4.05	1.89
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.45	0.21	2.10	0.99	0.45	0.21
Yard Waste	**9.05**	**4.16**	**14.75**	**6.95**	**31.50**	**14.66**

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#10(10/31/08)		#11(10/31/08)		#12(10/31/08)	
Weather	sunny		sunny		sunny	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**48.45**	**22.27**	**31.05**	**14.62**	**38.25**	**17.80**
Wood		**1.08**		**2.64**		**0.35**
Non-Treated Wood	1.75	0.80	0.00	0.00	0.75	0.35
Treated Wood	0.60	0.28	5.6	2.64	0.00	0.00
Demolition/Renovation/ Construction Debris	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Durables		**0.78**		**0.00**	**0.00**	**3.19**
All Electrical & Household Appliances	1.70	0.78	0.00	0.00	6.85	3.19
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**9.10**	**4.18**	**3.35**	**1.58**	**15.95**	**7.42**
Diapers	**8.05**	**3.70**	**6.15**	**2.90**	**4.15**	**1.93**
Rubbers	**1.85**	**0.85**	**0.05**	**0.02**	**0.00**	**0.00**
Household hazardous Materials		**4.27**		**0.09**		**1.77**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0	0.00	0.00	0.00	3.10	1.44
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.15	0.07	0.00	0.00	0.70	0.33
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.40	0.18	0.20	0.09	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	8.75	4.02	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**3.45**	**1.59**	**2**	**0.94**	**2.90**	**1.35**
Other-Specify	**0.00**	**0.00**	**14.25**	**6.71**	**6.45**	**3.00**
Total	**217.60**	**100.00**	**212.35**	**100.00**	**214.85**	**100.00**

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#13(11/1/08)		#14(11/6/08)		#15(11/6/08)	
Weather	58°F,cloudy		65°F,sunny		65°F,sunny	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**29.88**		**23.17**		**23.82**
OCC and Kraft bags	35.70	16.50	29.44	14.63	25.95	12.90
Newspaper	13.40	6.19	2.35	1.17	9.15	4.55
Magazines	1.90	0.88	0.55	0.27	0.76	0.38
High Grade/Office	2.65	1.22	5.65	2.81	4.05	2.01
Mixed Recyclable Paper (including Books, Boxboard)	0.90	0.42	0.95	0.47	0.30	0.15
Compostable Paper	4.70	2.17	1.90	0.94	2.70	1.34
Other Non-recyclable, Non-compostable Paper	5.40	2.50	5.80	2.88	5.00	2.49
Plastic		**10.15**		**20.73**		**15.00**
#1 PET Non-Deposit Beverage Containers	2.20	1.02	6.31	3.13	4.25	2.11
#1 PET Deposit Beverage Containers	0.85	0.39	0.35	0.17	0.05	0.02
#1 PET All Other Containers	0.00	0.00	0.00	0.00	0.00	0.00
#2 HDPE Containers	3.15	1.46	5.10	2.53	2.40	1.19
# 6 Styrofoam	2.05	0.95	0.65	0.32	1.85	0.92
All Other Numbered Containers (#3,4,5,6,7)	2.10	0.97	0.55	0.27	0.55	0.27
Other Plastic – NOT Numbered	3.30	1.53	17.45	8.67	14.46	7.19
Film/Wrap/Bags	8.30	3.84	11.31	5.62	6.60	3.28
Metal		**8.53**		**5.99**		**1.74**
Aluminum Non-Deposit Beverage Containers	2.30	1.06	1.35	0.67	0.65	0.32
Aluminum Deposit Beverage Containers	0.00	0.00	1.70	0.84	0.00	0.00
Aluminum All Other Containers	0.10	0.05	5.45	2.71	0.00	0.00
Other Non-Ferrous Scrap	0.00	0.00	0.00	0.00	0.00	0.00
Ferrous Food & Beverage Containers	7.70	3.56	1.00	0.50	1.20	0.60
Other Ferrous Scrap	8.35	3.86	2.55	1.27	1.65	0.82
Glass		**5.92**		**1.99**		**5.64**
Clear	2.25	1.04	0.00	0.00	6.40	3.18
Green	0.00	0.00	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	10.55	4.88	4.00	1.99	4.95	2.46
Yard Waste	**30.70**	**14.19**	**18.45**	**9.17**	**30.45**	**15.14**

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#13(11/1/08)		#14(11/6/08)		#15(11/6/08)	
Weather	58°F,cloudy		65°F,sunny		65°F,sunny	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**27.40**	**12.66**	**24.50**	**12.17**	**21.70**	**10.79**
Wood		**9.41**		**2.98**		**2.26**
Non-Treated Wood	0.00	0.00	0.00	0.00	0.00	0.00
Treated Wood	20.35	9.41	6.00	2.98	4.55	2.26
Demolition/Renovation/ Construction Debris	**0.00**	**0.00**	**7.45**	**3.70**	**5.60**	**2.78**
Durables	**0.00**	**2.08**		**10.36**		**12.82**
All Electrical & Household Appliances	4.50	2.08	6.65	3.30	9.15	4.55
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	14.20	7.05	16.63	8.27
Textiles & Leathers	**2.25**	**1.04**	**11.30**	**5.61**	**11.7**	**5.82**
Diapers	**0.85**	**0.39**	**3.60**	**1.79**	**1.6**	**0.80**
Rubbers	**0.05**	**0.02**	**1.4**	**0.70**	**0.05**	**0.02**
Household hazardous Materials		**0.67**		**0.07**		**0.94**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0	0.00	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.85	0.39	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.15	0.07	0.95	0.47
Batteries (Other)	0.60	0.28	0.00	0.00	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.95	0.47
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**2.70**	**1.25**	**0.15**	**0.07**	**2.1**	**1.04**
Other-Specify	**8.25**	**3.81**	**3.03**	**1.51**	**2.75**	**1.37**
Total	**216.35**	**100.00**	**201.29**	**100.00**	**201.10**	**100.00**

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#16(11/608)		#17(11/6/08)		#18(11/12/08)	
Weather	65°F,sunny		65°F,sunny		46°F,cloudy	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**16.40**		**23.21**		**25.01**
OCC and Kraft bags	9.50	4.32	24.00	9.22	12.60	6.14
Newspaper	3.30	1.50	12.35	4.75	12.60	6.14
Magazines	9.60	4.36	5.30	2.04	8.55	4.16
High Grade/Office	3.05	1.39	6.65	2.56	10.20	4.97
Mixed Recyclable Paper (including Books, Boxboard)	0.05	0.02	0.30	0.12	0.00	0.00
Compostable Paper	8.95	4.07	6.30	2.42	3.25	1.58
Other Non-recyclable, Non-compostable Paper	1.65	0.75	5.50	2.11	4.15	2.02
Plastic		**15.66**		**11.18**		**8.38**
#1 PET Non-Deposit Beverage Containers	2.15	0.98	3.85	1.48	1.00	0.49
#1 PET Deposit Beverage Containers	1.30	0.59	0.00	0.00	1.40	0.68
#1 PET All Other Containers	0.90	0.41	0.05	0.02	0.25	0.12
#2 HDPE Containers	2.78	1.26	4.20	1.61	1.85	0.90
# 6 Styrofoam	0.80	0.36	1.45	0.56	2.05	1.00
All Other Numbered Containers (#3,4,5,6,7)	0.60	0.27	0.55	0.21	1.35	0.66
Other Plastic – NOT Numbered	6.85	3.11	11.70	4.50	4.40	2.14
Film/Wrap/Bags	19.10	8.68	7.30	2.81	4.90	2.39
Metal		**0.70**		**10.78**		**4.02**
Aluminum Non-Deposit Beverage Containers	0.50	0.23	0.65	0.25	1.75	0.85
Aluminum Deposit Beverage Containers	0.05	0.02	0.00	0.00	0.00	0.00
Aluminum All Other Containers	0.20	0.09	15.45	5.94	0.00	0.00
Other Non-Ferrous Scrap	0.20	0.09	0.00	0.00	0.10	0.05
Ferrous Food & Beverage Containers	0.20	0.09	1.15	0.44	5.60	2.73
Other Ferrous Scrap	0.40	0.18	10.80	4.15	0.80	0.39
Glass		**0.20**		**0.23**		**16.56**
Clear	0.00	0.00	0.00	0.00	28.85	14.05
Green	0.00	0.00	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.45	0.20	0.60	0.23	5.15	2.51
Yard Waste	**33.60**	**15.26**	**15.55**	**5.98**	**13.65**	**6.65**

Table D-1: Bartholomew County Landfill Data (Columbus)						
	#16(11/608)		#17(11/6/08)		#18(11/12/08)	
Weather	65°F,sunny		65°F,sunny		46°F,cloudy	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**60.20**	**27.35**	**15.50**	**5.96**	**40.60**	**19.77**
Wood		**0.52**		**22.04**		**2.46**
Non-Treated Wood	0.00	0.00	0.00	0.00	2.50	1.22
Treated Wood	1.15	0.52	57.35	22.04	2.55	1.24
Demolition/Renovation/ Construction Debris	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Durables	**0.00**	**22.01**	**0.00**	**1.36**		**7.48**
All Electrical & Household Appliances	1.05	0.48	3.55	1.36	3.60	1.75
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	47.40	21.53	0.00	0.00	11.75	5.72
Textiles & Leathers	**2.65**	**1.20**	**6.10**	**2.34**	**10.55**	**5.14**
Diapers	**0.00**	**0.00**	**6.90**	**2.65**	**0.80**	**0.39**
Rubbers	**0.05**	**0.02**	**7.65**	**2.94**	**0**	**0.00**
Household hazardous Materials		**0.25**		**9.65**		**0.19**
Oil Filters	0.00	0.00	8.45	3.25	0.00	0.00
Paints & Solvents	0.00	0.00	6.75	2.59	0	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	7.90	3.04	0.30	0.15
Household Cleaners	0.00	0.00	0.00	0.00	0.10	0.05
Batteries (Lead-Acid)	0.55	0.25	0.45	0.17	0.00	0.00
Batteries (Other)	0.00	0.00	1.55	0.60	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**0.90**	**0.41**	**2.95**	**1.13**	**2.2**	**1.07**
Other-Specify	**0.00**	**0.00**	**1.40**	**0.54**	**5.95**	**2.90**
Total	**220.13**	**100.00**	**260.20**	**100.00**	**205.35**	**100.00**

Table D-1: Bartholomew County Landfill Data (Columbus)				
	#19(11/12/08)		#20(11/12/08)	
Weather	46°F,cloudy		46°F,cloudy	
Origin	N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**
Paper		**43.27**		**34.29**
OCC and Kraft bags	14.75	6.23	35.20	15.53
Newspaper	35.15	14.85	16.90	7.46
Magazines	30.00	12.68	6.75	2.98
High Grade/Office	10.40	4.39	5.30	2.34
Mixed Recyclable Paper (including Books, Boxboard)	0.15	0.06	4.60	2.03
Compostable Paper	8.25	3.49	3.20	1.41
Other Non-recyclable, Non-compostable Paper	3.70	1.56	5.75	2.54
Plastic		**9.11**		**14.19**
#1 PET Non-Deposit Beverage Containers	1.65	0.70	3.30	1.46
#1 PET Deposit Beverage Containers	0.15	0.06	3.00	1.32
#1 PET All Other Containers	0.20	0.08	0.00	0.00
#2 HDPE Containers	1.70	0.72	1.25	0.55
# 6 Styrofoam	4.80	2.03	2.45	1.08
All Other Numbered Containers (#3,4,5,6,7)	1.75	0.74	1.40	0.62
Other Plastic – NOT Numbered	5.50	2.32	11.95	5.27
Film/Wrap/Bags	5.80	2.45	8.80	3.88
Metal		**2.32**		**1.15**
Aluminum Non-Deposit Beverage Containers	1.15	0.49	0.65	0.29
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00
Aluminum All Other Containers	0.00	0.00	0.00	0.00
Other Non-Ferrous Scrap	0.65	0.27	0.20	0.09
Ferrous Food & Beverage Containers	3.45	1.46	1.75	0.77
Other Ferrous Scrap	0.25	0.11	0.00	0.00
Glass		**3.21**		**3.27**
Clear	7.60	3.21	6.20	2.74
Green	0.00	0.00	1.00	0.44
Blue	0.00	0.00	0.00	0.00
Brown	0.00	0.00	0.20	0.09
Yard Waste	**54.60**	**23.07**	**0.60**	**0.26**
Food Waste	**23.60**	**9.97**	**44.45**	**19.62**

Table D-1: Bartholomew County Landfill Data (Columbus)				
	#19(11/12/08)		#20(11/12/08)	
Weather	46°F,cloudy		46°F,cloudy	
Origin	N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**
Wood		**3.36**		**3.51**
Non-Treated Wood	2.10	0.89	1.85	0.82
Treated Wood	5.85	2.47	6.10	2.69
Demolition/Renovation/ Construction Debris	**0.00**	**0.00**	**0.00**	**0.00**
Durables		**1.37**	**0.00**	**4.26**
All Electrical & Household Appliances	2.05	0.87	5.50	2.43
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	1.20	0.51	4.15	1.83
Textiles & Leathers	**0.35**	**0.15**	**20.40**	**9.00**
Diapers	**7.15**	**3.02**	**6.65**	**2.93**
Rubbers	**0.10**	**0.04**	**0.00**	**0.00**
Household hazardous Materials		**0.63**		**0.15**
Oil Filters	0.00	0.00	0.00	0.00
Paints & Solvents	1.50	0.63	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.20	0.09
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.15	0.07
Sharps	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**0.5**	**0.21**	**1.00**	**0.44**
Other-Specify	**0.6**	**0.25**	**15.70**	**6.93**
Total	**236.65**	**100.00**	**226.60**	**100.00**

Table D-1: Bartholomew County Landfill Data (Columbus)						
	By Total Weight of Samples		By Ave %		Confidence Interval	
	Total Value of 20 Samples		**Average value of 20 samples**		**Lower Bound**	**Upper Bound**
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper	**1382.15**	**31.43**	**69.11**	**31.38**	**28.46**	**34.29**
OCC and Kraft bags	422.89	9.62	21.14	9.63	8.04	11.23
Newspaper	311.00	7.07	15.55	7.03	5.51	8.55
Magazines	168.46	3.83	8.42	3.78	2.74	4.81
High Grade/Office	171.80	3.91	8.59	3.94	2.90	4.97
Mixed Recyclable Paper (including Books, Boxboard)	44.60	1.01	2.23	1.01	0.47	1.54
Compostable Paper	127.80	2.91	6.39	2.89	2.38	3.41
Other Non-recyclable, Non-compostable Paper	135.60	3.08	6.78	3.10	2.27	3.94
Plastic	**640.31**	**14.56**	**32.02**	**14.62**	**13.10**	**16.15**
#1 PET Non-Deposit Beverage Containers	62.96	1.43	3.15	1.44	1.07	1.82
#1 PET Deposit Beverage Containers	59.65	1.36	2.98	1.36	0.64	2.08
#1 PET All Other Containers	14.95	0.34	0.75	0.34	0.19	0.50
#2 HDPE Containers	59.83	1.36	2.99	1.37	1.11	1.63
# 6 Styrofoam	45.45	1.03	2.27	1.03	0.79	1.27
All Other Numbered Containers (#3,4,5,6,7)	36.40	0.83	1.82	0.83	0.58	1.08
Other Plastic – NOT Numbered	169.61	3.86	8.48	3.87	3.01	4.74
Film/Wrap/Bags	191.46	4.35	9.57	4.37	3.81	4.93
Metal	**184.98**	**4.21**	**9.25**	**4.16**	**3.20**	**5.11**
Aluminum Non-Deposit Beverage Containers	29.70	0.68	1.49	0.68	0.48	0.87
Aluminum Deposit Beverage Containers	6.95	0.16	0.35	0.16	0.05	0.28
Aluminum All Other Containers	26.10	0.59	1.31	0.55	0.01	1.09
Other Non-Ferrous Scrap	13.15	0.30	0.66	0.30	0.01	0.58
Ferrous Food & Beverage Containers	77.73	1.77	3.89	1.78	1.37	2.20
Other Ferrous Scrap	31.35	0.71	1.57	0.69	0.22	1.16
Glass	**200.65**	**4.56**	**10.03**	**4.63**	**2.77**	**6.50**
Clear	110.65	2.52	5.53	2.57	1.36	3.78
Green	16.75	0.38	0.84	0.38	0.04	0.72
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	73.25	1.67	3.66	1.68	0.50	2.87
Yard Waste	**411.07**	**9.35**	**20.55**	**9.34**	**6.41**	**12.27**
Food Waste	**615.50**	**14.00**	**30.78**	**14.13**	**11.77**	**16.49**

Table D-1: Bartholomew County Landfill Data (Columbus)						
	By Total Weight of Samples		By Ave %		Confidence Interval	
	Total Value of 20 Samples		**Average value of 20 samples**		**Lower Bound**	**Upper Bound**
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Wood	**170.25**	**3.87**	**8.51**	**3.69**	**1.77**	**5.62**
Non-Treated Wood	44.80	1.02	2.24	1.02	0.24	1.80
Treated Wood	125.45	2.85	6.27	2.68	0.73	4.63
Demolition/Renovation/ Construction Debris	**14.90**	**0.34**	**0.75**	**0.37**	**0.00**	**0.75**
Durables	**172.43**	**3.92**	**8.62**	**4.03**	**1.91**	**6.15**
All Electrical & Household Appliances	54.25	1.23	2.71	1.25	0.75	1.76
Central Processing Units/Peripherals	12.05	0.27	0.60	0.28	0.00	0.62
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.35	0.01	0.02	0.01	0.00	0.02
Other (Furniture & Furnishings)	105.78	2.41	5.29	2.48	0.49	4.48
Textiles & Leathers	**180.10**	**4.10**	**9.01**	**4.13**	**2.95**	**5.31**
Diapers	**140.35**	**3.19**	**7.02**	**3.18**	**1.64**	**4.27**
Rubbers	**13.51**	**0.31**	**0.68**	**0.29**	**0.02**	**0.55**
Household hazardous Materials	**80.03**	**1.82**	**4.00**	**1.73**	**0.46**	**3.01**
Oil Filters	8.45	0.19	0.42	0.16	0.00	0.44
Paints & Solvents	42.80	0.97	2.14	0.94	0.00	1.99
Pesticides, Herbicides, Fungicides	8.20	0.19	0.41	0.16	0.00	0.42
Household Cleaners	2.30	0.05	0.12	0.05	0.01	0.10
Batteries (Lead-Acid)	2.30	0.05	0.12	0.05	0.01	0.10
Batteries (Other)	4.35	0.10	0.22	0.09	0.04	0.15
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	11.63	0.26	0.58	0.27	0.00	0.62
Sharps	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**45.00**	**1.02**	**2.25**	**1.02**	**0.76**	**1.28**
Other-Specify	**145.63**	**3.31**	**7.28**	**3.31**	**1.98**	**4.63**
Total	**4396.91**	**100.00**	**219.85**	**100.00**	**100.00**	**100.00**

Table D-2 Adams County Transfer Station Data

Table D-2: Adams County Transfer Station (Decatur)						
	#1(05/28/09)		#2(05/28/09)		#3(05/29/09)	
Weather	63°F,cloudy,humid,rain		63°F,cloudy,humid,rain		64°F,sunny	
Origin	truck 2, Decatur		truck 2, Berne		truck2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**34.29**		**26.67**		**31.97**
OCC and Kraft bags	25.30	12.55	11.85	5.55	28.00	11.86
Newspaper	4.85	2.41	7.35	3.44	13.21	5.60
Magazines	4.25	2.11	7.20	3.37	1.25	0.53
High Grade/Office	11.65	5.78	3.70	1.73	12.75	5.40
Mixed Recyclable Paper (including Books, Boxboard)	5.70	2.83	7.25	3.39	4.75	2.01
Compostable Paper	16.40	8.13	7.40	3.46	7.00	2.97
Other Non-recyclable, Non-compostable Paper	1.00	0.50	12.25	5.73	8.50	3.60
Plastic		**21.00**		**19.02**		**15.86**
#1 PET Non-Deposit Beverage Containers	6.45	3.20	5.40	2.53	1.35	0.57
#1 PET Deposit Beverage Containers	1.20	0.60	2.25	1.05	3.30	1.40
#1 PET All Other Containers	1.75	0.87	2.00	0.94	0.45	0.19
#2 HDPE Containers	3.05	1.51	6.80	3.18	2.55	1.08
# 6 Styrofoam	4.50	2.23	3.10	1.45	1.90	0.80
All Other Numbered Containers (#3,4,5,6,7)	3.65	1.81	3.55	1.66	3.10	1.31
Other Plastic – NOT Numbered	4.80	2.38	8.30	3.88	8.05	3.41
Film/Wrap/Bags	16.95	8.41	9.25	4.33	16.75	7.10
Metal		**4.22**		**3.32**		**3.58**
Aluminum Non-Deposit Beverage Containers	2.65	1.31	0.85	0.40	3.85	1.63
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.05	0.02
Aluminum All Other Containers	1.00	0.50	0.35	0.16	0.20	0.08
Other Non-Ferrous Scrap	0.10	0.05	0.05	0.02	0.00	0.00
Ferrous Food & Beverage Containers	3.70	1.83	5.80	2.71	2.80	1.19
Other Ferrous Scrap	1.05	0.52	0.05	0.02	1.55	0.66
Glass		**3.60**		**4.77**		**2.22**
Clear	4.75	2.36	8.75	4.09	1.75	0.74
Green	0.00	0.00	0.85	0.40	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.10	0.04

Table D-2: Adams County Transfer Station (Decatur)						
	#1(05/28/09)		#2(05/28/09)		#3(05/29/09)	
Weather	63°F,cloudy,humid,rain		63°F,cloudy,humid,rain		64°F,sunny	
Origin	truck 2, Decatur		truck 2, Berne		truck2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Brown	2.50	1.24	0.60	0.28	3.40	1.44
Yard Waste	**4.80**	**2.38**	**5.65**	**2.64**	**27.65**	**11.71**
Food Waste	**37.85**	**18.77**	**20.60**	**9.64**	**24.80**	**10.51**
Wood		**0.89**		**1.05**		**1.48**
Non-Treated Wood	0.00	0.00	0.00	0.00	0.00	0.00
Treated Wood	1.79	0.89	2.25	1.05	3.50	1.48
Demolition/Renovation/ Construction Debris	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Durables		**0.52**		**3.32**		**1.29**
All Electrical & Household Appliances	1.05	0.52	7.10	3.32	3.05	1.29
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**5.20**	**2.58**	**8.25**	**3.86**	**8.80**	**3.73**
Diapers	**12.35**	**6.12**	**46.50**	**21.76**	**30.10**	**12.75**
Rubbers	**1.45**	**0.72**	**2.30**	**1.08**	**0.35**	**0.15**
Household hazardous Materials		**0.15**		**0.00**		**0.91**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0.00	0.00	1.90	0.80
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.20	0.10	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.10	0.05	0.00	0.00	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.25	0.11
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**5.25**	**2.60**	**4.80**	**2.25**	**8.10**	**3.43**
Other-Specify	**4.35**	**2.16**	**1.30**	**0.61**	**0.95**	**0.40**
Total	**201.64**	**100.00**	**213.70**	**100.00**	**236.06**	**100.00**

Table D-2: Adams County Transfer Station (Decatur)						
	#4(06/01/09)		#5(06/01/09)		#6(06/02/09)	
Weather	69°F,cloudy		69°F,cloudy		62°F,foggy	
Origin	truck 2, Decatur, heavy pick-up week		truck 2, Decatur		truck 2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**36.62**		**29.82**		**17.16**
OCC and Kraft bags	23.90	10.76	18.40	8.27	11.90	5.11
Newspaper	11.50	5.18	14.30	6.43	7.15	3.07
Magazines	7.25	3.26	6.55	2.94	2.35	1.01
High Grade/Office	16.95	7.63	5.10	2.29	10.15	4.36
Mixed Recyclable Paper (including Books, Boxboard)	9.85	4.43	5.65	2.54	1.70	0.73
Compostable Paper	6.20	2.79	3.00	1.35	3.65	1.57
Other Non-recyclable, Non-compostable Paper	5.70	2.57	13.35	6.00	3.05	1.31
Plastic		**19.74**		**13.57**		**18.55**
#1 PET Non-Deposit Beverage Containers	1.00	0.45	2.60	1.17	0.65	0.28
#1 PET Deposit Beverage Containers	1.85	0.83	1.65	0.74	0.80	0.34
#1 PET All Other Containers	0.25	0.11	0.65	0.29	0.25	0.11
#2 HDPE Containers	1.90	0.86	3.25	1.46	1.25	0.54
# 6 Styrofoam	10.05	4.52	2.45	1.10	1.90	0.82
All Other Numbered Containers (#3,4,5,6,7)	3.10	1.40	1.85	0.83	0.75	0.32
Other Plastic – NOT Numbered	11.75	5.29	5.50	2.47	26.50	11.38
Film/Wrap/Bags	13.95	6.28	12.25	5.51	11.10	4.77
Metal		**4.14**		**4.56**		**1.93**
Aluminum Non-Deposit Beverage Containers	1.95	0.88	2.00	0.90	0.65	0.28
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.15	0.06
Aluminum All Other Containers	0.45	0.20	1.10	0.49	0.70	0.30
Other Non-Ferrous Scrap	0.25	0.11	0.25	0.11	0.20	0.09
Ferrous Food & Beverage Containers	6.05	2.72	5.80	2.61	2.45	1.05
Other Ferrous Scrap	0.50	0.23	1.00	0.45	0.35	0.15
Glass		**5.72**		**3.37**		**1.63**
Clear	5.00	2.25	3.70	1.66	2.80	1.20
Green	0.00	0.00	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	7.70	3.47	3.80	1.71	1.00	0.43
Yard Waste	**13.05**	**5.87**	**21.15**	**9.51**	**102.10**	**43.85**

Table D-2: Adams County Transfer Station (Decatur)						
	#4(06/01/09)		#5(06/01/09)		#6(06/02/09)	
Weather	69°F,cloudy		69°F,cloudy		62°F,foggy	
Origin	truck 2, Decatur, heavy pick-up week		truck 2, Decatur		truck 2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**33.80**	**15.21**	**21.15**	**9.51**	**16.95**	**7.28**
Wood		**0.16**		**11.42**		**0.84**
Non-Treated Wood	0.00	0.00	1.80	0.81	0.05	0.02
Treated Wood	0.35	0.16	23.60	10.61	1.90	0.82
Demolition/Renovation/ Construction Debris	**4.60**	**2.07**	**0.00**	**0.00**	**0.00**	**0.00**
Durables		**0.99**		**0.56**		**0.28**
All Electrical & Household Appliances	2.20	0.99	0.00	0.00	0.65	0.28
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	1.25	0.56	0.00	0.00
Textiles & Leathers	**2.45**	**1.10**	**9.05**	**4.07**	**6.20**	**2.66**
Diapers	**11.45**	**5.15**	**10.95**	**4.92**	**6.30**	**2.71**
Rubbers	**0.10**	**0.05**	**0.10**	**0.04**	**0.15**	**0.06**
Household hazardous Materials		**0.00**		**0.25**		**0.21**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0.40	0.18	0.30	0.13
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.15	0.07	0.20	0.09
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**4.25**	**1.91**	**2.90**	**1.30**	**4.20**	**1.80**
Other-Specify	**2.80**	**1.26**	**15.80**	**7.10**	**2.40**	**1.03**
Total	**222.15**	**100.00**	**222.50**	**100.00**	**232.85**	**100.00**

Table D-2: Adams County Transfer Station (Decatur)						
	#7(06/02/09)		#8(06/03/09)		#9(06/03/09)	
Weather	62°F,cloudy		56°F,rainy		56°F,rainy	
Origin	truck 2, Decatur		truck 2, Berne		truck 2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**19.70**		**43.41**		**27.64**
OCC and Kraft bags	13.10	5.82	22.55	9.79	29.75	12.62
Newspaper	3.80	1.69	17.10	7.43	10.90	4.62
Magazines	0.80	0.36	13.06	5.67	3.60	1.53
High Grade/Office	10.85	4.82	20.55	8.92	6.95	2.95
Mixed Recyclable Paper (including Books, Boxboard)	2.30	1.02	10.45	4.54	5.90	2.50
Compostable Paper	4.65	2.07	9.15	3.97	3.90	1.65
Other Non-recyclable, Non-compostable Paper	8.85	3.93	7.10	3.08	4.15	1.76
Plastic		**12.53**		**14.29**		**22.16**
#1 PET Non-Deposit Beverage Containers	0.80	0.36	1.45	0.63	2.25	0.95
#1 PET Deposit Beverage Containers	1.40	0.62	2.15	0.93	4.10	1.74
#1 PET All Other Containers	0.20	0.09	1.15	0.50	1.25	0.53
#2 HDPE Containers	2.55	1.13	3.95	1.72	2.80	1.19
# 6 Styrofoam	2.15	0.96	1.80	0.78	2.45	1.04
All Other Numbered Containers (#3,4,5,6,7)	1.25	0.56	3.10	1.35	1.20	0.51
Other Plastic – NOT Numbered	6.35	2.82	6.15	2.67	19.35	8.21
Film/Wrap/Bags	13.50	6.00	13.15	5.71	18.85	8.00
Metal		**2.64**		**5.73**		**4.88**
Aluminum Non-Deposit Beverage Containers	1.05	0.47	1.00	0.43	2.20	0.93
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.00	0.00
Aluminum All Other Containers	0.40	0.18	0.50	0.22	0.30	0.13
Other Non-Ferrous Scrap	0.00	0.00	0.65	0.28	0.00	0.00
Ferrous Food & Beverage Containers	2.45	1.09	3.65	1.59	2.60	1.10
Other Ferrous Scrap	2.05	0.91	7.40	3.21	6.40	2.71
Glass		**5.04**		**2.45**		**3.90**
Clear	3.95	1.75	4.10	1.78	7.60	3.22
Green	7.40	3.29	1.05	0.46	1.15	0.49
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.00	0.00	0.50	0.22	0.45	0.19
Yard Waste	**0.60**	**0.27**	**15.40**	**6.69**	**9.10**	**3.86**

Table D-2: Adams County Transfer Station (Decatur)						
	#7(06/02/09)		#8(06/03/09)		#9(06/03/09)	
Weather	62°F,cloudy		56°F,rainy		56°F,rainy	
Origin	truck 2, Decatur		truck 2, Berne		truck 2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**32.35**	**14.37**	**39.85**	**17.31**	**29.45**	**12.49**
Wood		**3.55**		**0.46**		**1.93**
Non-Treated Wood	0.00	0.00	0.10	0.04	0.00	0.00
Treated Wood	8.00	3.55	0.95	0.41	4.55	1.93
Demolition/Renovation/ Construction Debris	**19.45**	**8.64**	**0.00**	**0.00**	**0.00**	**0.00**
Durables		**12.99**		**2.00**		**0.55**
All Electrical & Household Appliances	1.80	0.80	4.60	2.00	1.30	0.55
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	27.45	12.19	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**27.60**	**12.26**	**12.50**	**5.43**	**17.05**	**7.23**
Diapers	**9.70**	**4.31**	**2.90**	**1.26**	**14.00**	**5.94**
Rubbers	**1.40**	**0.62**	**0.00**	**0.00**	**0.35**	**0.15**
Household hazardous Materials		**1.67**		**0.22**		**6.85**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	3.75	1.67	0.00	0.00	16.05	6.81
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.50	0.22	0.10	0.04
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.10**	**0.04**
Fines/Supermix	**2.00**	**0.89**	**1.45**	**0.63**	**3.85**	**1.63**
Other-Specify	**1.15**	**0.51**	**0.30**	**0.13**	**1.75**	**0.74**
Total	**225.10**	**100.00**	**230.26**	**100.00**	**235.75**	**100.00**

Table D-2: Adams County Transfer Station (Decatur)						
	#10(06/03/09)		#11(06/04/09)		#12(06/04/09)	
Weather	56°F,rainy		58°F,sunny		58°F,sunny	
Origin	truck 2, Berne		truck 2, Decatur		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**32.20**		**48.34**		**21.43**
OCC and Kraft bags	19.95	8.93	39.10	17.38	10.85	4.54
Newspaper	3.85	1.72	13.05	5.80	24.95	10.44
Magazines	3.05	1.36	12.85	5.71	1.35	0.56
High Grade/Office	9.00	4.03	12.65	5.62	2.35	0.98
Mixed Recyclable Paper (including Books, Boxboard)	8.25	3.69	16.10	7.16	2.20	0.92
Compostable Paper	13.90	6.22	10.20	4.53	8.75	3.66
Other Non-recyclable, Non-compostable Paper	13.95	6.24	4.80	2.13	0.75	0.31
Plastic		**18.71**		**16.96**		**6.88**
#1 PET Non-Deposit Beverage Containers	4.40	1.97	1.85	0.82	1.50	0.63
#1 PET Deposit Beverage Containers	7.75	3.47	3.80	1.69	1.20	0.50
#1 PET All Other Containers	0.80	0.36	1.30	0.58	0.50	0.21
#2 HDPE Containers	2.95	1.32	3.45	1.53	2.25	0.94
# 6 Styrofoam	1.85	0.83	1.85	0.82	0.40	0.17
All Other Numbered Containers (#3,4,5,6,7)	2.55	1.14	2.60	1.16	1.55	0.65
Other Plastic – NOT Numbered	7.12	3.19	7.20	3.20	5.35	2.24
Film/Wrap/Bags	14.40	6.44	16.10	7.16	3.70	1.55
Metal		**2.08**		**3.47**		**1.74**
Aluminum Non-Deposit Beverage Containers	0.55	0.25	1.65	0.73	2.50	1.05
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.00	0.00
Aluminum All Other Containers	0.90	0.40	0.45	0.20	1.00	0.42
Other Non-Ferrous Scrap	0.00	0.00	0.30	0.13	0.00	0.00
Ferrous Food & Beverage Containers	2.60	1.16	4.00	1.78	0.65	0.27
Other Ferrous Scrap	0.60	0.27	1.40	0.62	0.00	0.00
Glass		**0.22**		**2.78**		**4.71**
Clear	0.50	0.22	4.95	2.20	5.30	2.22
Green	0.00	0.00	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.00	0.00	1.30	0.58	5.95	2.49
Yard Waste	**1.05**	**0.47**	**1.30**	**0.58**	**17.80**	**7.45**

Table D-2: Adams County Transfer Station (Decatur)						
	#10(06/03/09)		#11(06/04/09)		#12(06/04/09)	
Weather	56°F,rainy		58°F,sunny		58°F,sunny	
Origin	truck 2, Berne		truck 2, Decatur		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**54.50**	**24.39**	**35.35**	**15.71**	**8.55**	**3.58**
Wood		**0.00**		**0.29**		**0.46**
Non-Treated Wood	0.00	0.00	0.00	0.00	0.00	0.00
Treated Wood	0.00	0.00	0.65	0.29	1.10	0.46
Demolition/Renovation/ Construction Debris	**0.00**	**0.00**	**0.00**	**0.00**	**110.30**	**46.16**
Durables		**6.58**		**0.60**		**2.53**
All Electrical & Household Appliances	14.70	6.58	1.35	0.60	6.05	2.53
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**7.95**	**3.56**	**12.60**	**5.60**	**2.10**	**0.88**
Diapers	**18.30**	**8.19**	**6.35**	**2.82**	**6.15**	**2.57**
Rubbers	**3.95**	**1.77**	**0.10**	**0.04**	**0.65**	**0.27**
Household hazardous Materials		**0.00**		**0.04**		**0.00**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0.00	0.00	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.10	0.04	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.05**	**0.02**	**0.00**	**0.00**
Fines/Supermix	**2.30**	**1.03**	**5.45**	**2.42**	**1.60**	**0.67**
Other-Specify	**1.80**	**0.81**	**0.70**	**0.31**	**1.60**	**0.67**
Total	**223.47**	**100.00**	**224.95**	**100.00**	**238.95**	**100.00**

Table D-2: Adams County Transfer Station (Decatur)						
	#13(06/05/09)		#14(06/05/09)		#15(06/08/09)	
Weather	59°F,sunny		59°F,sunny		74°F,cloudy	
Origin	truck 2, Decatur		truck 2, Decatur		truck 2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**35.94**		**34.56**		**48.96**
OCC and Kraft bags	19.25	8.48	32.45	14.69	25.30	10.93
Newspaper	13.65	6.01	11.25	5.09	29.30	12.66
Magazines	9.35	4.12	5.90	2.67	11.25	4.86
High Grade/Office	15.10	6.65	7.95	3.60	30.30	13.09
Mixed Recyclable Paper (including Books, Boxboard)	4.20	1.85	4.75	2.15	5.05	2.18
Compostable Paper	18.80	8.28	12.55	5.68	11.05	4.78
Other Non-recyclable, Non-compostable Paper	1.25	0.55	1.50	0.68	1.05	0.45
Plastic		**17.51**		**13.92**		**14.20**
#1 PET Non-Deposit Beverage Containers	1.45	0.64	1.40	0.63	3.35	1.45
#1 PET Deposit Beverage Containers	0.75	0.33	1.70	0.77	1.85	0.80
#1 PET All Other Containers	1.35	0.59	1.45	0.66	1.55	0.67
#2 HDPE Containers	4.05	1.78	1.20	0.54	2.50	1.08
# 6 Styrofoam	1.95	0.86	1.95	0.88	2.50	1.08
All Other Numbered Containers (#3,4,5,6,7)	2.00	0.88	1.85	0.84	2.50	1.08
Other Plastic – NOT Numbered	14.45	6.36	10.60	4.80	6.25	2.70
Film/Wrap/Bags	13.75	6.06	10.60	4.80	12.35	5.34
Metal		**3.96**		**2.72**		**3.87**
Aluminum Non-Deposit Beverage Containers	0.30	0.13	3.25	1.47	0.80	0.35
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.00	0.00
Aluminum All Other Containers	0.25	0.11	0.10	0.05	0.30	0.13
Other Non-Ferrous Scrap	1.85	0.81	0.65	0.29	0.30	0.13
Ferrous Food & Beverage Containers	3.85	1.70	1.60	0.72	6.80	2.94
Other Ferrous Scrap	2.75	1.21	0.40	0.18	0.75	0.32
Glass		**5.31**		**4.32**		**1.38**
Clear	11.55	5.09	2.95	1.34	2.15	0.93
Green	0.00	0.00	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00	1.05	0.45
Brown	0.50	0.22	6.60	2.99	0.00	0.00

Table D-2: Adams County Transfer Station (Decatur)						
	#13(06/05/09)		#14(06/05/09)		#15(06/08/09)	
Weather	59°F,sunny		59°F,sunny		74°F,cloudy	
Origin	truck 2, Decatur		truck 2, Decatur		truck 2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Yard Waste	**9.90**	**4.36**	**3.80**	**1.72**	**13.05**	**5.64**
Food Waste	**39.50**	**17.40**	**55.60**	**25.17**	**34.10**	**14.74**
Wood		**0.55**		**2.65**		**0.09**
Non-Treated Wood	0.20	0.09	0.00	0.00	0.05	0.02
Treated Wood	1.05	0.46	5.85	2.65	0.15	0.06
Demolition/Renovation/ Construction Debris	**0.00**	**0.00**	**0.00**	**0.00**	**0.25**	**0.11**
Durables		**0.46**		**0.34**		**1.02**
All Electrical & Household Appliances	1.05	0.46	0.75	0.34	2.35	1.02
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**8.90**	**3.92**	**15.80**	**7.15**	**5.35**	**2.31**
Diapers	**8.70**	**3.83**	**6.15**	**2.78**	**11.45**	**4.95**
Rubbers	**0.00**	**0.00**	**0.25**	**0.11**	**0.10**	**0.04**
Household hazardous Materials		**0.33**		**2.38**		**0.09**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	2.10	0.95	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	1.75	0.79	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.75	0.33	0.20	0.09	0.20	0.09
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	1.20	0.54	0.00	0.00
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.02**
Fines/Supermix	**2.95**	**1.30**	**2.95**	**1.34**	**3.95**	**1.71**
Other-Specify	**11.65**	**5.13**	**1.85**	**0.84**	**2.05**	**0.89**
Total	**227.05**	**100.00**	**220.90**	**100.00**	**231.40**	**100.00**

Table D-2: Adams County Transfer Station (Decatur)						
	#16(06/08/09)		#17(06/09/09)		#18(06/09/09)	
Weather	74°F,cloudy		68°F,sunny		68°F,sunny	
Origin	truck 2, Berne		truck 2, Berne		truck 2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**19.69**		**43.06**		**39.40**
OCC and Kraft bags	19.35	8.43	65.70	29.40	50.10	21.22
Newspaper	7.00	3.05	1.75	0.78	9.65	4.09
Magazines	1.10	0.48	0.80	0.36	9.75	4.13
High Grade/Office	0.90	0.39	11.50	5.15	12.25	5.19
Mixed Recyclable Paper (including Books, Boxboard)	2.55	1.11	1.75	0.78	2.85	1.21
Compostable Paper	12.00	5.23	12.75	5.70	7.80	3.30
Other Non-recyclable, Non-compostable Paper	2.30	1.00	2.00	0.89	0.60	0.25
Plastic		**15.23**		**13.69**		**19.23**
#1 PET Non-Deposit Beverage Containers	5.50	2.40	1.60	0.72	5.35	2.27
#1 PET Deposit Beverage Containers	2.35	1.02	3.55	1.59	1.65	0.70
#1 PET All Other Containers	1.40	0.61	2.70	1.21	2.25	0.95
#2 HDPE Containers	3.55	1.55	2.60	1.16	2.55	1.08
# 6 Styrofoam	6.40	2.79	1.50	0.67	7.55	3.20
All Other Numbered Containers (#3,4,5,6,7)	2.00	0.87	1.75	0.78	1.45	0.61
Other Plastic – NOT Numbered	5.05	2.20	4.40	1.97	12.30	5.21
Film/Wrap/Bags	8.70	3.79	12.50	5.59	12.30	5.21
Metal		**4.73**		**2.89**		**4.94**
Aluminum Non-Deposit Beverage Containers	1.25	0.54	1.70	0.76	2.25	0.95
Aluminum Deposit Beverage Containers	0.05	0.02	0.05	0.02	0.10	0.04
Aluminum All Other Containers	0.30	0.13	0.00	0.00	0.00	0.00
Other Non-Ferrous Scrap	1.75	0.76	0.70	0.31	0.80	0.34
Ferrous Food & Beverage Containers	7.05	3.07	2.50	1.12	4.05	1.72
Other Ferrous Scrap	0.45	0.20	1.50	0.67	4.45	1.89
Glass		**0.28**		**3.87**		**2.69**
Clear	0.65	0.28	8.65	3.87	0.00	0.00
Green	0.00	0.00	0.00	0.00	3.80	1.61
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.00	0.00	0.00	0.00	2.55	1.08
Yard Waste	**1.40**	**0.61**	**10.45**	**4.68**	**24.30**	**10.29**

Table D-2: Adams County Transfer Station (Decatur)						
	#16(06/08/09)		#17(06/09/09)		#18(06/09/09)	
Weather	74°F,cloudy		68°F,sunny		68°F,sunny	
Origin	truck 2, Berne		truck 2, Berne		truck 2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**12.85**	**5.60**	**20.60**	**9.22**	**25.75**	**10.91**
Wood		**19.12**		**0.22**		**0.23**
Non-Treated Wood	0.70	0.30	0.00	0.00	0.00	0.00
Treated Wood	43.20	18.82	0.50	0.22	0.55	0.23
Demolition/Renovation/ Construction Debris	**71.05**	**30.95**	**1.50**	**0.67**	**0.10**	**0.04**
Durables		**0.00**		**7.07**		**0.55**
All Electrical & Household Appliances	0.00	0.00	15.80	7.07	1.30	0.55
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**2.60**	**1.13**	**6.25**	**2.80**	**7.55**	**3.20**
Diapers	**3.80**	**1.66**	**1.40**	**0.63**	**11.05**	**4.68**
Rubbers	**0.40**	**0.17**	**0.00**	**0.00**	**0.70**	**0.30**
Household hazardous Materials		**0.02**		**2.19**		**0.32**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	4.75	2.13	0.30	0.13
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.05	0.02	0.15	0.07	0.45	0.19
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.10**	**0.04**	**0.10**	**0.04**
Fines/Supermix	**1.85**	**0.81**	**3.25**	**1.45**	**5.25**	**2.22**
Other-Specify	**0.00**	**0.00**	**16.80**	**7.52**	**2.25**	**0.95**
Total	**229.55**	**100.00**	**223.50**	**100.00**	**236.05**	**100.00**

Table D-2: Adams County Transfer Station (Decatur)						
	#19(06/09/09)		#20(06/10/09)		#21(06/10/09)	
Weather	68°F,sunny		65°F,cloudy		65°F,cloudy	
Origin	truck 2, Berne		truck 2, Berne		truck 2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**28.29**		**40.93**		**41.94**
OCC and Kraft bags	20.15	8.78	18.05	8.14	17.45	7.44
Newspaper	3.20	1.39	19.05	8.59	20.10	8.58
Magazines	6.35	2.77	9.10	4.10	14.80	6.31
High Grade/Office	17.10	7.45	24.35	10.98	21.95	9.36
Mixed Recyclable Paper (including Books, Boxboard)	4.95	2.16	3.20	1.44	3.65	1.56
Compostable Paper	11.20	4.88	15.50	6.99	18.20	7.76
Other Non-recyclable, Non-compostable Paper	1.95	0.85	1.50	0.68	2.15	0.92
Plastic		**23.69**		**17.03**		**18.39**
#1 PET Non-Deposit Beverage Containers	4.00	1.74	2.30	1.04	1.95	0.83
#1 PET Deposit Beverage Containers	5.95	2.59	2.60	1.17	2.05	0.87
#1 PET All Other Containers	1.90	0.83	1.70	0.77	2.05	0.87
#2 HDPE Containers	3.15	1.37	6.30	2.84	4.95	2.11
# 6 Styrofoam	4.75	2.07	1.95	0.88	1.90	0.81
All Other Numbered Containers (#3,4,5,6,7)	1.20	0.52	3.05	1.38	1.85	0.79
Other Plastic – NOT Numbered	20.50	8.93	9.40	4.24	13.20	5.63
Film/Wrap/Bags	12.90	5.62	10.45	4.71	15.15	6.46
Metal		**4.36**		**2.73**		**5.52**
Aluminum Non-Deposit Beverage Containers	2.25	0.98	1.90	0.86	1.50	0.64
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.00	0.00
Aluminum All Other Containers	0.00	0.00	0.30	0.14	0.15	0.06
Other Non-Ferrous Scrap	1.15	0.50	0.20	0.09	0.35	0.15
Ferrous Food & Beverage Containers	3.55	1.55	2.65	1.20	6.95	2.97
Other Ferrous Scrap	3.05	1.33	1.00	0.45	4.00	1.71
Glass		**1.29**		**5.14**		**2.45**
Clear	0.00	0.00	4.35	1.96	2.75	1.17
Green	2.85	1.24	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.10	0.04	7.05	3.18	3.00	1.28
Yard Waste	**9.65**	**4.21**	**8.65**	**3.90**	**10.25**	**4.37**

Table D-2: Adams County Transfer Station (Decatur)						
	#19(06/09/09)		#20(06/10/09)		#21(06/10/09)	
Weather	68°F,sunny		65°F,cloudy		65°F,cloudy	
Origin	truck 2, Berne		truck 2, Berne		truck 2, Decatur	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**37.20**	**16.21**	**32.90**	**14.84**	**23.75**	**10.13**
Wood		**2.31**		**0.50**		**2.22**
Non-Treated Wood	0.00	0.00	0.00	0.00	0.00	0.00
Treated Wood	5.30	2.31	1.10	0.50	5.20	2.22
Demolition/Renovation/ Construction Debris	**5.95**	**2.59**	**11.15**	**5.03**	**0.65**	**0.28**
Durables		**0.00**		**0.09**		**0.38**
All Electrical & Household Appliances	0.00	0.00	0.20	0.09	0.90	0.38
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**21.50**	**9.37**	**17.45**	**7.87**	**18.70**	**7.98**
Diapers	**7.70**	**3.36**	**1.65**	**0.74**	**3.65**	**1.56**
Rubbers	**0.05**	**0.02**	**0.30**	**0.14**	**0.00**	**0.00**
Household hazardous Materials		**3.99**		**0.07**		**1.26**
Oil Filters	3.40	1.48	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0.00	0.00	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.50	0.21
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.65	0.28	0.15	0.07	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	5.10	2.22	0.00	0.00	2.45	1.05
Sharps	**0.15**	**0.07**	**0.00**	**0.00**	**0.10**	**0.04**
Fines/Supermix	**0.00**	**0.00**	**1.95**	**0.88**	**6.45**	**2.75**
Other-Specify	**0.60**	**0.26**	**0.25**	**0.11**	**1.70**	**0.73**
Total	**229.45**	**100.00**	**221.70**	**100.00**	**234.40**	**100.00**

Table D-2: Adams County Transfer Station (Decatur)						
	By Total Weight of Samples		By Ave %		Confidence Interval	
	Total Value of 21 Samples		**Average value of 21 samples**		**Lower Bound**	**Upper Bound**
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper	**1590.27**	**33.40**	**75.73**	**33.43**	**29.92**	**36.94**
OCC and Kraft bags	522.45	10.97	24.88	10.99	8.78	13.19
Newspaper	246.96	5.19	11.76	5.15	3.98	6.31
Magazines	131.96	2.77	6.28	2.77	2.05	3.49
High Grade/Office	264.05	5.55	12.57	5.54	4.33	6.76
Mixed Recyclable Paper (including Books, Boxboard)	113.05	2.37	5.38	2.39	1.80	2.98
Compostable Paper	214.05	4.50	10.19	4.52	3.72	5.33
Other Non-recyclable, Non-compostable Paper	97.75	2.05	4.65	2.07	1.33	2.81
Plastic	**796.97**	**16.74**	**37.95**	**16.77**	**15.35**	**18.19**
#1 PET Non-Deposit Beverage Containers	56.60	1.19	2.70	1.20	0.89	1.51
#1 PET Deposit Beverage Containers	53.90	1.13	2.57	1.13	0.85	1.42
#1 PET All Other Containers	26.90	0.56	1.28	0.57	0.45	0.69
#2 HDPE Containers	67.60	1.42	3.22	1.43	1.18	1.67
# 6 Styrofoam	64.85	1.36	3.09	1.37	0.98	1.76
All Other Numbered Containers (#3,4,5,6,7)	45.90	0.96	2.19	0.97	0.82	1.12
Other Plastic – NOT Numbered	212.57	4.46	10.12	4.44	3.49	5.38
Film/Wrap/Bags	268.65	5.64	12.79	5.66	5.10	6.22
Metal	**177.05**	**3.72**	**8.43**	**3.71**	**3.28**	**4.15**
Aluminum Non-Deposit Beverage Containers	36.10	0.76	1.72	0.76	0.61	0.91
Aluminum Deposit Beverage Containers	0.40	0.01	0.02	0.01	0.00	0.01
Aluminum All Other Containers	8.75	0.18	0.42	0.19	0.13	0.24
Other Non-Ferrous Scrap	9.55	0.20	0.45	0.20	0.11	0.29
Ferrous Food & Beverage Containers	81.55	1.71	3.88	1.72	1.41	2.02
Other Ferrous Scrap	40.70	0.85	1.94	0.84	0.51	1.17
Glass	**151.45**	**3.18**	**7.21**	**3.20**	**2.58**	**3.82**
Clear	86.20	1.81	4.10	1.83	1.31	2.34
Green	17.10	0.36	0.81	0.36	0.06	0.66
Blue	1.15	0.02	0.05	0.02	0.00	0.06
Brown	47.00	0.99	2.24	0.99	0.56	1.43
Yard Waste	**311.10**	**6.53**	**14.81**	**6.43**	**2.99**	**9.87**
Food Waste	**637.45**	**13.39**	**30.35**	**13.48**	**11.41**	**15.55**

Table D-2: Adams County Transfer Station (Decatur)						
	By Total Weight of Samples		By Ave %		Confidence Interval	
	Total Value of 21 Samples		**Average value of 21 samples**		**Lower Bound**	**Upper Bound**
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Wood	**114.44**	**2.40**	**5.45**	**2.40**	**0.69**	**4.11**
Non-Treated Wood	2.90	0.06	0.14	0.06	0.00	0.13
Treated Wood	111.54	2.34	5.31	2.34	0.68	4.00
Demolition/Renovation/ Construction Debris	**225.00**	**4.73**	**10.71**	**4.60**	**0.19**	**9.00**
Durables	**94.90**	**1.99**	**4.52**	**2.01**	**0.81**	**3.21**
All Electrical & Household Appliances	66.20	1.39	3.15	1.40	0.65	2.15
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	27.45	0.58	1.31	0.58	0.00	1.58
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	1.25	0.03	0.06	0.03	0.00	0.07
Textiles & Leathers	**223.85**	**4.70**	**10.66**	**4.70**	**3.58**	**5.82**
Diapers	**230.60**	**4.84**	**10.98**	**4.89**	**3.10**	**6.68**
Rubbers	**12.70**	**0.27**	**0.60**	**0.27**	**0.11**	**0.44**
Household hazardous Materials	**48.15**	**1.01**	**2.29**	**1.00**	**0.36**	**1.64**
Oil Filters	3.40	0.07	0.16	0.07	0.00	0.19
Paints & Solvents	29.55	0.62	1.41	0.61	0.03	1.19
Pesticides, Herbicides, Fungicides	0.50	0.01	0.02	0.01	0.00	0.03
Household Cleaners	1.95	0.04	0.09	0.04	0.00	0.11
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	3.75	0.08	0.18	0.08	0.04	0.11
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	9.00	0.19	0.43	0.19	0.00	0.39
Sharps	**0.65**	**0.01**	**0.03**	**0.01**	**0.00**	**0.02**
Fines/Supermix	**74.75**	**1.57**	**3.56**	**1.57**	**1.26**	**1.89**
Other-Specify	**72.05**	**1.51**	**3.43**	**1.53**	**0.71**	**2.36**
Total	**4761.38**	**100.00**	**226.73**	**100.00**	**100.00**	**100.00**

Table D-3 Newton County Landfill Data

Table D-3: Newton County Landfill Data (Brook)						
	#1(06/17/09)		#2(06/17/09)		#3(06/18/09)	
Weather	72°F,cloudy,sunny,windy		72°F,cloudy,sunny,windy		71°F, AM rain	
Origin	truck 75, Scherriville tr. st.		truck 75, Scherriville tr. st.		truck 60, Lake St	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**36.34**		**18.25**		**27.98**
OCC and Kraft bags	11.85	5.46	14.60	6.40	28.60	12.61
Newspaper	13.35	6.15	7.35	3.22	13.50	5.95
Magazines	15.80	7.28	1.75	0.77	5.65	2.49
High Grade/Office	18.75	8.64	7.25	3.18	11.55	5.09
Mixed Recyclable Paper (including Books, Boxboard)	2.15	0.99	2.70	1.18	0.55	0.24
Compostable Paper	15.90	7.33	6.05	2.65	3.20	1.41
Other Non-recyclable, Non-compostable Paper	1.05	0.48	1.95	0.85	0.40	0.18
Plastic		**9.59**		**11.94**		**20.73**
#1 PET Non-Deposit Beverage Containers	1.30	0.60	3.65	1.60	0.80	0.35
#1 PET Deposit Beverage Containers	1.90	0.88	1.35	0.59	0.55	0.24
#1 PET All Other Containers	0.15	0.07	0.25	0.11	1.05	0.46
#2 HDPE Containers	0.20	0.09	2.25	0.99	2.75	1.21
# 6 Styrofoam	0.70	0.32	0.65	0.28	0.50	0.22
All Other Numbered Containers (#3,4,5,6,7)	0.75	0.35	0.65	0.28	1.10	0.49
Other Plastic – NOT Numbered	4.70	2.17	8.70	3.81	34.10	15.04
Film/Wrap/Bags	11.10	5.12	9.75	4.27	6.15	2.71
Metal		**7.07**		**2.08**		**21.35**
Aluminum Non-Deposit Beverage Containers	0.80	0.37	2.75	1.20	0.95	0.42
Aluminum Deposit Beverage Containers	0.05	0.02	0.10	0.04	0.00	0.00
Aluminum All Other Containers	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Ferrous Scrap	5.70	2.63	0.35	0.15	0.85	0.37
Ferrous Food & Beverage Containers	3.00	1.38	0.80	0.35	1.35	0.60
Other Ferrous Scrap	5.80	2.67	0.75	0.33	45.25	19.96
Glass		**4.24**		**0.83**		**1.63**
Clear	7.80	3.59	1.15	0.50	1.80	0.79
Green	0.00	0.00	0.15	0.07	1.70	0.75

Table D-3: Newton County Landfill Data (Brook)						
	#1(06/17/09)		#2(06/17/09)		#3(06/18/09)	
Weather	72°F,cloudy,sunny,windy		72°F,cloudy,sunny,windy		71°F, AM rain	
Origin	truck 75, Scherriville tr. st.		truck 75, Scherriville tr. st.		truck 60, Lake St	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	1.40	0.65	0.60	0.26	0.20	0.09
Yard Waste	**16.30**	**7.51**	**61.40**	**26.90**	**21.70**	**9.57**
Food Waste	**5.05**	**2.33**	**12.25**	**5.37**	**3.40**	**1.50**
Wood		**4.86**		**5.70**		**1.63**
Non-Treated Wood	0.00	0.00	0.00	0.00	0.05	0.02
Treated Wood	10.55	4.86	13.00	5.70	3.65	1.61
Demolition/Renovation/ Construction Debris	**29.70**	**13.69**	**3.65**	**1.60**	**13.35**	**5.89**
Durables		**8.27**		**8.81**		**0.09**
All Electrical & Household Appliances	0.05	0.02	0.30	0.13	0.20	0.09
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	17.90	8.25	19.80	8.67	0.00	0.00
Textiles & Leathers	**2.05**	**0.94**	**25.20**	**11.04**	**11.60**	**5.12**
Diapers	**9.15**	**4.22**	**1.70**	**0.74**	**5.10**	**2.25**
Rubbers	**0.40**	**0.18**	**0.72**	**0.32**	**0.20**	**0.09**
Household hazardous Materials		**0.21**		**0.00**		**0.00**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0.00	0.00	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.45	0.21	0.00	0.00	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.05**	**0.02**	**0.05**	**0.02**
Fines/Supermix	**1.20**	**0.55**	**13.05**	**5.72**	**4.60**	**2.03**
Other-Specify	**0.00**	**0.00**	**1.60**	**0.70**	**0.30**	**0.13**
Total	**217.00**	**100.00**	**228.27**	**100.00**	**226.75**	**100.00**

Table D-3: Newton County Landfill Data (Brook)						
	#4(06/23/09)		#5(06/23/09)		#6(06/24/09)	
Weather	80°F, sunny		80°F, sunny		81°F, sunny	
Origin	truck 91, Crown Point		truck 85, Lake Station		truck 58	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**23.52**		**23.93**		**31.34**
OCC and Kraft bags	16.40	7.37	15.50	7.07	16.50	6.47
Newspaper	11.70	5.26	10.45	4.76	16.10	6.31
Magazines	8.50	3.82	5.25	2.39	3.10	1.22
High Grade/Office	2.30	1.03	10.85	4.95	23.10	9.06
Mixed Recyclable Paper (including Books, Boxboard)	2.80	1.26	4.15	1.89	5.30	2.08
Compostable Paper	10.10	4.54	5.10	2.33	15.15	5.94
Other Non-recyclable, Non-compostable Paper	0.55	0.25	1.20	0.55	0.70	0.27
Plastic		**18.94**		**12.15**		**28.60**
#1 PET Non-Deposit Beverage Containers	1.15	0.52	1.30	0.59	35.00	13.72
#1 PET Deposit Beverage Containers	1.65	0.74	1.00	0.46	0.55	0.22
#1 PET All Other Containers	1.00	0.45	1.25	0.57	1.20	0.47
#2 HDPE Containers	3.35	1.50	4.10	1.87	7.00	2.74
# 6 Styrofoam	6.45	2.90	1.30	0.59	0.95	0.37
All Other Numbered Containers (#3,4,5,6,7)	1.50	0.67	1.05	0.48	0.80	0.31
Other Plastic – NOT Numbered	16.30	7.32	7.10	3.24	15.55	6.10
Film/Wrap/Bags	10.75	4.83	9.55	4.35	11.90	4.67
Metal		**6.63**		**18.46**		**3.20**
Aluminum Non-Deposit Beverage Containers	1.50	0.67	1.95	0.89	0.60	0.24
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.55	0.22
Aluminum All Other Containers	0.15	0.07	0.25	0.11	0.00	0.00
Other Non-Ferrous Scrap	0.80	0.36	0.40	0.18	0.60	0.24
Ferrous Food & Beverage Containers	9.15	4.11	2.75	1.25	3.45	1.35
Other Ferrous Scrap	3.15	1.42	35.15	16.02	2.95	1.16
Glass		**3.93**		**1.82**		**2.67**
Clear	4.35	1.95	1.65	0.75	3.66	1.43
Green	1.85	0.83	1.35	0.62	0.90	0.35
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	2.55	1.15	1.00	0.46	2.25	0.88
Yard Waste	**13.15**	**5.91**	**1.20**	**0.55**	**4.10**	**1.61**

Table D-3: Newton County Landfill Data (Brook)						
	#4(06/23/09)		#5(06/23/09)		#6(06/24/09)	
Weather	80°F, sunny		80°F, sunny		81°F, sunny	
Origin	truck 91, Crown Point		truck 85, Lake Station		truck 58	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**12.55**	**5.64**	**13.45**	**6.13**	**10.40**	**4.08**
Wood		**13.72**		**12.15**		**8.51**
Non-Treated Wood	0.00	0.00	3.55	1.62	0.00	0.00
Treated Wood	30.55	13.72	23.10	10.53	21.70	8.51
Demolition/Renovation/ Construction Debris	**9.80**	**4.40**	**8.05**	**3.67**	**22.85**	**8.96**
Durables		**0.00**		**0.18**		**1.59**
All Electrical & Household Appliances	0.00	0.00	0.40	0.18	0.25	0.10
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	3.81	1.49
Textiles & Leathers	**28.45**	**12.78**	**9.60**	**4.38**	**15.70**	**6.16**
Diapers	**7.00**	**3.14**	**25.95**	**11.83**	**0.15**	**0.06**
Rubbers	**0.00**	**0.00**	**0.05**	**0.02**	**0.25**	**0.10**
Household hazardous Materials		**0.00**		**0.23**		**0.00**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0.00	0.00	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.50	0.23	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.05**	**0.02**	**0.00**	**0.00**
Fines/Supermix	**3.10**	**1.39**	**9.65**	**4.40**	**6.05**	**2.37**
Other-Specify	**0.00**	**0.00**	**0.15**	**0.07**	**1.95**	**0.76**
Total	**222.60**	**100.00**	**219.35**	**100.00**	**255.07**	**100.00**

Table D-3: Newton County Landfill Data (Brook)						
	#7(06/24/09)		#8(06/25/09)		#9(06/25/09)	
Weather	81°F, sunny		81°F, sunny		81°F, sunny	
Origin	#7(06/24/09)		#8(06/25/09)		#9(06/25/09)	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**39.20**		**25.28**		**24.24**
OCC and Kraft bags	49.05	22.96	11.45	4.87	28.70	11.32
Newspaper	15.45	7.23	5.85	2.49	8.10	3.19
Magazines	1.40	0.66	8.20	3.48	2.30	0.91
High Grade/Office	7.15	3.35	9.40	3.99	4.20	1.66
Mixed Recyclable Paper (including Books, Boxboard)	1.95	0.91	4.20	1.78	2.25	0.89
Compostable Paper	8.50	3.98	19.35	8.22	15.15	5.98
Other Non-recyclable, Non-compostable Paper	0.25	0.12	1.05	0.45	0.75	0.30
Plastic		**12.50**		**12.85**		**25.46**
#1 PET Non-Deposit Beverage Containers	1.35	0.63	0.30	0.13	0.70	0.28
#1 PET Deposit Beverage Containers	0.95	0.44	1.30	0.55	2.80	1.10
#1 PET All Other Containers	0.75	0.35	1.50	0.64	0.55	0.22
#2 HDPE Containers	0.55	0.26	2.80	1.19	7.35	2.90
# 6 Styrofoam	0.80	0.37	2.60	1.10	2.60	1.03
All Other Numbered Containers (#3,4,5,6,7)	1.15	0.54	0.45	0.19	2.65	1.05
Other Plastic – NOT Numbered	9.65	4.52	7.75	3.29	32.85	12.96
Film/Wrap/Bags	11.50	5.38	13.55	5.76	15.05	5.94
Metal		**3.07**		**6.35**		**2.54**
Aluminum Non-Deposit Beverage Containers	1.60	0.75	0.15	0.06	1.50	0.59
Aluminum Deposit Beverage Containers	0.05	0.02	0.00	0.00	0.00	0.00
Aluminum All Other Containers	0.00	0.00	0.05	0.02	0.00	0.00
Other Non-Ferrous Scrap	1.55	0.73	0.95	0.40	0.05	0.02
Ferrous Food & Beverage Containers	1.45	0.68	0.65	0.28	1.95	0.77
Other Ferrous Scrap	1.90	0.89	13.15	5.59	2.95	1.16
Glass		**2.95**		**4.53**		**2.27**
Clear	5.25	2.46	7.40	3.14	3.90	1.54
Green	0.00	0.00	1.40	0.59	1.10	0.43
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	1.05	0.49	1.85	0.79	0.75	0.30
Yard Waste	**4.65**	**2.18**	**15.55**	**6.61**	**4.35**	**1.72**

Table D-3: Newton County Landfill Data (Brook)						
	#7(06/24/09)		#8(06/25/09)		#9(06/25/09)	
Weather	81°F, sunny		81°F, sunny		81°F, sunny	
Origin	#7(06/24/09)		#8(06/25/09)		#9(06/25/09)	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**21.85**	**10.23**	**37.25**	**15.83**	**11.55**	**4.56**
Wood		**5.92**		**1.44**		**11.26**
Non-Treated Wood	0.00	0.00	1.50	0.64	0.00	0.00
Treated Wood	12.65	5.92	1.90	0.81	28.55	11.26
Demolition/Renovation/ Construction Debris	**28.20**	**13.20**	**1.00**	**0.42**	**50.10**	**19.76**
Durables		**2.78**		**18.23**		**0.10**
All Electrical & Household Appliances	2.70	1.26	7.50	3.19	0.25	0.10
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	3.25	1.52	35.40	15.04	0.00	0.00
Textiles & Leathers	**9.40**	**4.40**	**11.20**	**4.76**	**8.40**	**3.31**
Diapers	**1.55**	**0.73**	**3.05**	**1.30**	**6.65**	**2.62**
Rubbers	**0.20**	**0.09**	**2.20**	**0.93**	**2.40**	**0.95**
Household hazardous Materials		**0.00**		**0.04**		**0.00**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0.00	0.00	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.10	0.04	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**5.90**	**2.76**	**3.05**	**1.30**	**2.35**	**0.93**
Other-Specify	**0.00**	**0.00**	**0.30**	**0.13**	**0.75**	**0.30**
Total	**213.65**	**100.00**	**235.35**	**100.00**	**253.55**	**100.00**

Table D-3: Newton County Landfill Data (Brook)						
	#10(06/26/09)		#11(06/26/09)		#12(06/26/09)	
Weather	79°F, sunny		79°F, sunny		79°F, sunny	
Origin	N/A		truck 97,East Chicago		truck 63, East Chicago	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**27.84**		**37.78**		**26.86**
OCC and Kraft bags	46.05	19.51	18.65	7.48	25.90	11.47
Newspaper	2.75	1.17	9.00	3.61	11.15	4.94
Magazines	1.90	0.81	0.70	0.28	1.95	0.86
High Grade/Office	5.75	2.44	51.95	20.84	10.50	4.65
Mixed Recyclable Paper (including Books, Boxboard)	0.85	0.36	1.80	0.72	1.85	0.82
Compostable Paper	7.20	3.05	10.90	4.37	9.25	4.10
Other Non-recyclable, Non-compostable Paper	1.20	0.51	1.20	0.48	0.05	0.02
Plastic		**19.92**		**31.49**		**11.91**
#1 PET Non-Deposit Beverage Containers	1.50	0.64	2.25	0.90	1.45	0.64
#1 PET Deposit Beverage Containers	2.50	1.06	5.70	2.29	0.70	0.31
#1 PET All Other Containers	0.45	0.19	30.80	12.35	0.70	0.31
#2 HDPE Containers	3.60	1.53	8.75	3.51	5.10	2.26
# 6 Styrofoam	0.80	0.34	1.95	0.78	0.75	0.33
All Other Numbered Containers (#3,4,5,6,7)	0.95	0.40	1.90	0.76	0.45	0.20
Other Plastic – NOT Numbered	20.65	8.75	14.35	5.76	7.25	3.21
Film/Wrap/Bags	16.55	7.01	12.80	5.13	10.50	4.65
Metal		**3.81**		**3.93**		**11.76**
Aluminum Non-Deposit Beverage Containers	0.45	0.19	0.65	0.26	0.95	0.42
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.00	0.00
Aluminum All Other Containers	0.00	0.00	0.00	0.00	0.05	0.02
Other Non-Ferrous Scrap	3.65	1.55	0.45	0.18	0.05	0.02
Ferrous Food & Beverage Containers	1.20	0.51	1.60	0.64	1.35	0.60
Other Ferrous Scrap	3.70	1.57	7.10	2.85	24.15	10.70
Glass		**0.53**		**2.34**		**0.24**
Clear	0.05	0.02	3.95	1.58	0.10	0.04
Green	0.40	0.17	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.80	0.34	1.88	0.75	0.45	0.20
Yard Waste	**10.65**	**4.51**	**0.00**	**0.00**	**9.10**	**4.03**

Table D-3: Newton County Landfill Data (Brook)						
	#10(06/26/09)		#11(06/26/09)		#12(06/26/09)	
Weather	79°F, sunny		79°F, sunny		79°F, sunny	
Origin	N/A		truck 97,East Chicago		truck 63, East Chicago	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**7.95**	**3.37**	**17.05**	**6.84**	**7.20**	**3.19**
Wood		**16.82**		**5.01**		**8.66**
Non-Treated Wood	0.00	0.00	0.00	0.00	13.90	6.16
Treated Wood	39.70	16.82	12.50	5.01	5.65	2.50
Demolition/Renovation/ Construction Debris	**30.75**	**13.03**	**2.30**	**0.92**	**55.30**	**24.49**
Durables		**0.00**		**3.37**		**5.27**
All Electrical & Household Appliances	0.00	0.00	0.20	0.08	6.60	2.92
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	8.20	3.29	5.30	2.35
Textiles & Leathers	**8.00**	**3.39**	**13.95**	**5.60**	**1.60**	**0.71**
Diapers	**2.65**	**1.12**	**1.35**	**0.54**	**0.40**	**0.18**
Rubbers	**3.25**	**1.38**	**0.75**	**0.30**	**0.00**	**0.00**
Household hazardous Materials		**0.00**		**0.62**		**0.31**
Oil Filters	0.00	0.00	0.00	0.00	0.70	0.31
Paints & Solvents	0.00	0.00	1.40	0.56	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.00	0.00	0.00	0.00
Mercury Containing Products	0.00	0.00	0.15	0.06	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**7.75**	**3.28**	**3.15**	**1.26**	**5.30**	**2.35**
Other-Specify	**2.35**	**1.00**	**0.00**	**0.00**	**0.10**	**0.04**
Total	**236.00**	**100.00**	**249.33**	**100.00**	**225.80**	**100.00**

Table D-3: Newton County Landfill Data (Brook)						
	#13(06/29/09)		#14(06/29/09)		#15(06/30/09)	
Weather	69°F, windy; making scale off		69°F, windy; making scale off		63°F, windy, cloudy	
Origin	truck 93, East Chicago		truck 58, Ohererville		truck 91, Lake Station	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**25.03**		**32.71**		**28.04**
OCC and Kraft bags	33.25	12.38	37.10	16.48	12.05	4.94
Newspaper	4.45	1.66	4.40	1.95	18.60	7.62
Magazines	4.40	1.64	0.30	0.13	4.30	1.76
High Grade/Office	3.75	1.40	7.75	3.44	12.75	5.22
Mixed Recyclable Paper (including Books, Boxboard)	0.85	0.32	2.40	1.07	1.50	0.61
Compostable Paper	14.60	5.44	20.60	9.15	18.00	7.37
Other Non-recyclable, Non-compostable Paper	5.90	2.20	1.10	0.49	1.25	0.51
Plastic		**20.61**		**18.67**		**17.39**
#1 PET Non-Deposit Beverage Containers	0.25	0.09	0.40	0.18	1.05	0.43
#1 PET Deposit Beverage Containers	0.75	0.28	3.10	1.38	1.75	0.72
#1 PET All Other Containers	0.35	0.13	0.15	0.07	1.40	0.57
#2 HDPE Containers	7.55	2.81	2.99	1.33	4.20	1.72
# 6 Styrofoam	0.85	0.32	0.50	0.22	0.80	0.33
All Other Numbered Containers (#3,4,5,6,7)	13.70	5.10	0.35	0.16	2.05	0.84
Other Plastic – NOT Numbered	7.95	2.96	12.20	5.42	17.30	7.09
Film/Wrap/Bags	23.95	8.92	22.35	9.93	13.90	5.69
Metal		**7.24**		**6.97**		**12.55**
Aluminum Non-Deposit Beverage Containers	0.35	0.13	1.00	0.44	1.00	0.41
Aluminum Deposit Beverage Containers	0.00	0.00	0.00	0.00	0.15	0.06
Aluminum All Other Containers	0.00	0.00	0.15	0.07	0.00	0.00
Other Non-Ferrous Scrap	2.35	0.88	0.00	0.00	1.45	0.59
Ferrous Food & Beverage Containers	16.20	6.03	1.55	0.69	2.25	0.92
Other Ferrous Scrap	0.55	0.20	13.00	5.77	25.80	10.57
Glass		**0.28**		**2.13**		**0.41**
Clear	0.75	0.28	1.00	0.44	0.00	0.00
Green	0.00	0.00	2.65	1.18	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.00	0.00	1.15	0.51	1.00	0.41
Yard Waste	**27.35**	**10.19**	**5.95**	**2.64**	**11.35**	**4.65**

Table D-3: Newton County Landfill Data (Brook)						
	#13(06/29/09)		#14(06/29/09)		#15(06/30/09)	
Weather	69°F, windy; making scale off		69°F, windy; making scale off		63°F, windy, cloudy	
Origin	truck 93, East Chicago		truck 58, Ohererville		truck 91, Lake Station	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**52.10**	**19.40**	**23.10**	**10.26**	**19.30**	**7.91**
Wood		**6.31**		**8.15**		**7.27**
Non-Treated Wood	0.00	0.00	1.80	0.80	0.00	0.00
Treated Wood	16.95	6.31	16.55	7.35	17.74	7.27
Demolition/Renovation/ Construction Debris	**13.65**	**5.08**	**0.00**	**0.00**	**0.00**	**0.00**
Durables		**0.65**		**0.29**		**1.31**
All Electrical & Household Appliances	1.75	0.65	0.65	0.29	3.20	1.31
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**9.00**	**3.35**	**31.50**	**13.99**	**11.35**	**4.65**
Diapers	**0.15**	**0.06**	**5.80**	**2.58**	**14.10**	**5.78**
Rubbers	**4.75**	**1.77**	**1.10**	**0.49**	**16.85**	**6.90**
Household hazardous Materials		**0.02**		**0.00**		**0.02**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0.00	0.00	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.05	0.02	0.00	0.00	0.05	0.02
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**0.00**	**0.00**	**0.44**	**0.20**	**3.80**	**1.56**
Other-Specify	**0.00**	**0.00**	**2.10**	**0.93**	**3.85**	**1.58**
Total	**268.50**	**100.00**	**225.18**	**100.00**	**244.14**	**100.00**

Table D-3: Newton County Landfill Data (Brook)						
	#16(06/30/09)		#17(06/30/09)		#18(07/01/09)	
Weather	63°F, windy, cloudy		63°F, windy, cloudy		64°F,very cloudy	
Origin	truck 58, East Chicago		truck 50, East Chicago		truck 69,East Chicago	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**34.10**		**31.21**		**25.22**
OCC and Kraft bags	26.60	11.62	33.95	15.04	19.30	9.25
Newspaper	20.80	9.08	10.45	4.63	6.10	2.92
Magazines	2.05	0.90	2.00	0.89	1.55	0.74
High Grade/Office	12.40	5.41	16.35	7.24	9.65	4.62
Mixed Recyclable Paper (including Books, Boxboard)	4.35	1.90	2.50	1.11	2.65	1.27
Compostable Paper	11.05	4.83	5.20	2.30	12.40	5.94
Other Non-recyclable, Non-compostable Paper	0.85	0.37	0.00	0.00	1.00	0.48
Plastic		**16.66**		**14.88**		**22.06**
#1 PET Non-Deposit Beverage Containers	1.30	0.57	1.45	0.64	2.25	1.08
#1 PET Deposit Beverage Containers	2.25	0.98	2.15	0.95	3.85	1.84
#1 PET All Other Containers	1.05	0.46	1.40	0.62	1.00	0.48
#2 HDPE Containers	3.55	1.55	4.90	2.17	3.35	1.60
# 6 Styrofoam	2.75	1.20	0.40	0.18	1.15	0.55
All Other Numbered Containers (#3,4,5,6,7)	1.80	0.79	1.20	0.53	1.15	0.55
Other Plastic – NOT Numbered	10.35	4.52	15.20	6.73	24.10	11.54
Film/Wrap/Bags	15.10	6.59	6.90	3.06	9.20	4.41
Metal		**3.84**		**3.28**		**5.75**
Aluminum Non-Deposit Beverage Containers	1.30	0.57	0.00	0.00	0.40	0.19
Aluminum Deposit Beverage Containers	0.20	0.09	0.90	0.40	0.80	0.38
Aluminum All Other Containers	0.00	0.00	0.00	0.00	0.70	0.34
Other Non-Ferrous Scrap	0.45	0.20	0.50	0.22	0.30	0.14
Ferrous Food & Beverage Containers	4.40	1.92	1.80	0.80	1.15	0.55
Other Ferrous Scrap	2.45	1.07	4.20	1.86	8.65	4.14
Glass		**5.44**		**1.00**		**2.75**
Clear	8.15	3.56	0.35	0.16	4.05	1.94
Green	0.00	0.00	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	4.30	1.88	1.90	0.84	1.70	0.81

Table D-3: Newton County Landfill Data (Brook)						
	#16(06/30/09)		#17(06/30/09)		#18(07/01/09)	
Weather	63°F, windy, cloudy		63°F, windy, cloudy		64°F,very cloudy	
Origin	truck 58, East Chicago		truck 50, East Chicago		truck 69,East Chicago	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Yard Waste	**2.60**	**1.14**	**0.00**	**0.00**	**17.20**	**8.24**
Food Waste	**23.60**	**10.31**	**5.35**	**2.37**	**11.45**	**5.49**
Wood		**4.50**		**26.76**		**14.59**
Non-Treated Wood	0.00	0.00	41.55	18.41	0.00	0.00
Treated Wood	10.30	4.50	18.85	8.35	30.45	14.59
Demolition/Renovation/ Construction Debris	**3.00**	**1.31**	**3.20**	**1.42**	**8.85**	**4.24**
Durables		**0.72**		**3.88**		**0.00**
All Electrical & Household Appliances	1.65	0.72	8.75	3.88	0.00	0.00
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**32.05**	**14.00**	**22.45**	**9.94**	**3.35**	**1.60**
Diapers	**7.40**	**3.23**	**2.20**	**0.97**	**11.60**	**5.56**
Rubbers	**1.15**	**0.50**	**0.20**	**0.09**	**2.60**	**1.25**
Household hazardous Materials		**1.62**		**0.00**		**0.81**
Oil Filters	0.00	0.00	0.00	0.00	1.25	0.60
Paints & Solvents	3.25	1.42	0.00	0.00	0.30	0.14
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.45	0.20	0.00	0.00	0.15	0.07
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.10**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**3.00**	**1.31**	**1.65**	**0.73**	**5.10**	**2.44**
Other-Specify	**2.95**	**1.29**	**7.85**	**3.48**	**0.00**	**0.00**
Total	**229.00**	**100.00**	**225.75**	**100.00**	**208.75**	**100.00**

Table D-3: Newton County Landfill Data (Brook)				
	#19(07/01/09)		#20(07/01/09)	
Weather	64°F,very cloudy		64°F,very cloudy	
Origin	truck89, Valpo		N/A	
Categories	**Material**	**%**	**Material**	**%**
Paper		**11.88**		**26.85**
OCC and Kraft bags	5.50	2.28	49.85	20.29
Newspaper	5.00	2.08	0.90	0.37
Magazines	4.75	1.97	0.75	0.31
High Grade/Office	5.70	2.37	2.75	1.12
Mixed Recyclable Paper (including Books, Boxboard)	1.40	0.58	2.30	0.94
Compostable Paper	6.10	2.53	9.20	3.75
Other Non-recyclable, Non-compostable Paper	0.15	0.06	0.20	0.08
Plastic		**6.56**		**12.44**
#1 PET Non-Deposit Beverage Containers	0.40	0.17	1.50	0.61
#1 PET Deposit Beverage Containers	1.20	0.50	6.35	2.58
#1 PET All Other Containers	0.35	0.15	0.10	0.04
#2 HDPE Containers	3.65	1.52	2.50	1.02
# 6 Styrofoam	0.45	0.19	0.50	0.20
All Other Numbered Containers (#3,4,5,6,7)	0.10	0.04	1.45	0.59
Other Plastic – NOT Numbered	7.30	3.03	7.55	3.07
Film/Wrap/Bags	2.35	0.98	10.60	4.32
Metal		**2.18**		**1.24**
Aluminum Non-Deposit Beverage Containers	0.20	0.08	0.00	0.00
Aluminum Deposit Beverage Containers	0.45	0.19	0.65	0.26
Aluminum All Other Containers	0.00	0.00	1.35	0.55
Other Non-Ferrous Scrap	0.40	0.17	0.20	0.08
Ferrous Food & Beverage Containers	0.40	0.17	0.35	0.14
Other Ferrous Scrap	3.80	1.58	0.50	0.20
Glass		**1.58**		**0.57**
Clear	2.90	1.20	1.35	0.55
Green	0.45	0.19	0.00	0.00
Blue	0.00	0.00	0.00	0.00
Brown	0.45	0.19	0.05	0.02
Yard Waste	**71.25**	**29.60**	**18.25**	**7.43**
Food Waste	**55.35**	**22.99**	**15.15**	**6.17**

Table D-3: Newton County Landfill Data (Brook)				
	#19(07/01/09)		#20(07/01/09)	
Weather	64°F,very cloudy		64°F,very cloudy	
Origin	truck89, Valpo		N/A	
Categories	**Material**	**%**	**Material**	**%**
Wood		**5.52**		**8.28**
Non-Treated Wood	0.00	0.00	0.00	0.00
Treated Wood	13.30	5.52	20.35	8.28
Demolition/Renovation/ Construction Debris	**18.95**	**7.87**	**35.75**	**14.55**
Durables		**1.72**		**15.20**
All Electrical & Household Appliances	1.85	0.77	0.00	0.00
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	2.30	0.96	37.35	15.20
Textiles & Leathers	**7.55**	**3.14**	**9.00**	**3.66**
Diapers	**9.50**	**3.95**	**2.75**	**1.12**
Rubbers	**1.15**	**0.48**	**4.25**	**1.73**
Household hazardous Materials		**0.29**		**0.04**
Oil Filters	0.70	0.29	0.00	0.00
Paints & Solvents	0.00	0.00	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.10	0.04
Mercury Containing Products	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**5.30**	**2.20**	**1.15**	**0.47**
Other-Specify	**0.10**	**0.04**	**0.60**	**0.24**
Total	**240.75**	**100.00**	**245.65**	**100.00**

Table D-3: Newton County Landfill Data (Brook)						
	By Total Weight of Samples		By Ave %		Confidence Interval	
	Total Value of 20 Samples		**Average value of 20 samples**		**Lower Bound**	**Upper Bound**
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper	**1299.05**	**27.81**	**64.95**	**27.88**	**25.36**	**30.40**
OCC and Kraft bags	500.85	10.72	25.04	10.76	8.55	12.97
Newspaper	195.45	4.18	9.77	4.23	3.32	5.14
Magazines	76.60	1.64	3.83	1.66	1.02	2.31
High Grade/Office	233.85	5.01	11.69	4.98	3.29	6.68
Mixed Recyclable Paper (including Books, Boxboard)	48.50	1.04	2.43	1.05	0.84	1.25
Compostable Paper	223.00	4.77	11.15	4.76	3.93	5.59
Other Non-recyclable, Non-compostable Paper	20.80	0.45	1.04	0.43	0.25	0.61
Plastic	**814.69**	**17.44**	**40.73**	**17.27**	**14.78**	**19.75**
#1 PET Non-Deposit Beverage Containers	59.35	1.27	2.97	1.22	0.07	2.36
#1 PET Deposit Beverage Containers	42.35	0.91	2.12	0.91	0.65	1.16
#1 PET All Other Containers	45.45	0.97	2.27	0.94	0.00	1.98
#2 HDPE Containers	80.49	1.72	4.02	1.69	1.36	2.02
# 6 Styrofoam	27.45	0.59	1.37	0.59	0.35	0.83
All Other Numbered Containers (#3,4,5,6,7)	35.20	0.75	1.76	0.72	0.30	1.13
Other Plastic – NOT Numbered	280.90	6.01	14.05	6.03	4.64	7.42
Film/Wrap/Bags	243.50	5.21	12.18	5.19	4.42	5.95
Metal	**307.50**	**6.58**	**15.38**	**6.67**	**4.56**	**8.77**
Aluminum Non-Deposit Beverage Containers	18.10	0.39	0.91	0.39	0.27	0.52
Aluminum Deposit Beverage Containers	3.90	0.08	0.20	0.08	0.03	0.14
Aluminum All Other Containers	2.70	0.06	0.14	0.06	0.00	0.11
Other Non-Ferrous Scrap	21.05	0.45	1.05	0.46	0.21	0.70
Ferrous Food & Beverage Containers	56.80	1.22	2.84	1.19	0.63	1.74
Other Ferrous Scrap	204.95	4.39	10.25	4.49	2.33	6.64
Glass	**96.89**	**2.07**	**4.84**	**2.11**	**1.52**	**2.70**
Clear	59.61	1.28	2.98	1.30	0.85	1.75
Green	11.95	0.26	0.60	0.26	0.12	0.40
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	25.33	0.54	1.27	0.55	0.38	0.72
Yard Waste	**316.10**	**6.77**	**15.81**	**6.75**	**3.65**	**9.85**
Food Waste	**365.35**	**7.82**	**18.27**	**7.70**	**5.46**	**9.93**

Table D-3: Newton County Landfill Data (Brook)						
	By Total Weight of Samples		By Ave %		Confidence Interval	
	Total Value of 20 Samples		**Average value of 20 samples**		**Lower Bound**	**Upper Bound**
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Wood	**410.34**	**8.79**	**20.52**	**8.85**	**6.58**	**11.12**
Non-Treated Wood	62.35	1.33	3.12	1.38	0.00	3.02
Treated Wood	347.99	7.45	17.40	7.47	5.84	9.11
Demolition/Renovation/ Construction Debris	**338.45**	**7.25**	**16.92**	**7.23**	**4.49**	**9.96**
Durables	**169.61**	**3.63**	**8.48**	**3.62**	**1.61**	**5.64**
All Electrical & Household Appliances	36.30	0.78	1.82	0.78	0.33	1.24
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	133.31	2.85	6.67	2.84	0.93	4.74
Textiles & Leathers	**271.40**	**5.81**	**13.57**	**5.85**	**4.23**	**7.46**
Diapers	**118.20**	**2.53**	**5.91**	**2.60**	**1.52**	**3.68**
Rubbers	**42.47**	**0.91**	**2.12**	**0.88**	**0.29**	**1.47**
Household hazardous Materials	**9.60**	**0.21**	**0.48**	**0.21**	**0.06**	**0.37**
Oil Filters	2.65	0.06	0.13	0.06	0.00	0.12
Paints & Solvents	4.95	0.11	0.25	0.11	0.00	0.24
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	1.85	0.04	0.09	0.04	0.01	0.07
Mercury Containing Products	0.15	0.00	0.01	0.00	0.00	0.01
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.25**	**0.01**	**0.01**	**0.01**	**0.00**	**0.01**
Fines/Supermix	**85.59**	**1.83**	**4.28**	**1.86**	**1.31**	**2.41**
Other-Specify	**24.95**	**0.53**	**1.25**	**0.53**	**0.21**	**0.86**
Total	**4670.43**	**100.00**	**233.52**	**100.00**	**100.00**	**100.00**

Table D-4 Daviess County Landfill Data

Table D-4: Daviess County Landfill Data (Washington)						
	#1(07/17/09)		#2(07/17/09)		#3(07/20/09)	
Weather	sunny		sunny		sunny	
Origin	truck 102, Washington		truck 102, Washington		truck 102	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**37.69**		**25.37**		**30.44**
OCC and Kraft bags	54.05	24.22	24.60	10.31	12.40	5.37
Newspaper	3.60	1.61	10.15	4.25	16.60	7.19
Magazines	1.40	0.63	3.50	1.47	11.05	4.79
High Grade/Office	5.55	2.49	7.75	3.25	14.45	6.26
Mixed Recyclable Paper (including Books, Boxboard)	1.60	0.72	4.50	1.89	4.55	1.97
Compostable Paper	15.20	6.81	8.50	3.56	10.60	4.59
Other Non-recyclable, Non-compostable Paper	2.70	1.21	1.55	0.65	0.60	0.26
Plastic		**21.40**		**14.83**		**18.83**
#1 PET Non-Deposit Beverage Containers	4.90	2.20	1.80	0.75	2.51	1.09
#1 PET Deposit Beverage Containers	2.95	1.32	1.65	0.69	2.35	1.02
#1 PET All Other Containers	0.55	0.25	1.20	0.50	3.35	1.45
#2 HDPE Containers	5.90	2.64	3.00	1.26	5.65	2.45
# 6 Styrofoam	2.10	0.94	2.45	1.03	2.75	1.19
All Other Numbered Containers (#3,4,5,6,7)	2.10	0.94	2.00	0.84	2.00	0.87
Other Plastic – NOT Numbered	17.55	7.86	6.30	2.64	14.15	6.13
Film/Wrap/Bags	11.70	5.24	17.00	7.12	10.70	4.64
Metal		**4.03**		**7.02**		**3.49**
Aluminum Non-Deposit Beverage Containers	0.00	0.00	2.95	1.24	2.00	0.87
Aluminum Deposit Beverage Containers	1.45	0.65	2.45	1.03	1.25	0.54
Aluminum All Other Containers	0.00	0.00	0.00	0.00	0.35	0.15
Other Non-Ferrous Scrap	0.35	0.16	0.20	0.08	0.25	0.11
Ferrous Food & Beverage Containers	5.40	2.42	6.45	2.70	2.95	1.28
Other Ferrous Scrap	1.80	0.81	4.70	1.97	1.25	0.54
Glass		**4.28**		**4.92**		**8.08**
Clear	3.90	1.75	6.10	2.56	10.45	4.53
Green	1.55	0.69	0.00	0.00	2.35	1.02
Blue	0.00	0.00	0.00	0.00	0.00	0.00

Table D-4: Daviess County Landfill Data (Washington)						
	#1(07/17/09)		#2(07/17/09)		#3(07/20/09)	
Weather	sunny		sunny		sunny	
Origin	truck 102, Washington		truck 102, Washington		truck 102	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Brown	4.10	1.84	5.65	2.37	5.85	2.53
Yard Waste	**5.00**	**2.24**	**28.75**	**12.04**	**2.65**	**1.15**
Food Waste	**30.60**	**13.71**	**38.20**	**16.00**	**27.95**	**12.11**
Wood		**0.96**		**3.69**		**3.96**
Non-Treated Wood	0.00	0.00	1.95	0.82	0.10	0.04
Treated Wood	2.15	0.96	6.85	2.87	9.05	3.92
Demolition/Renovation/ Construction Debris	**0.00**	**0.00**	**1.10**	**0.46**	**0.00**	**0.00**
Durables		**1.21**		**1.05**		**0.00**
All Electrical & Household Appliances	2.50	1.12	2.50	1.05	0.00	0.00
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00		0.00
Cell Phones	0.20	0.09	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**11.15**	**5.00**	**8.40**	**3.52**	**24.95**	**10.81**
Diapers	**17.05**	**7.64**	**16.90**	**7.08**	**19.95**	**8.64**
Rubbers	**0.05**	**0.02**	**0.00**	**0.00**	**0.05**	**0.02**
Household hazardous Materials		**0.43**		**2.05**		**0.52**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.65	0.29	4.75	1.99	1.00	0.43
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.30	0.13	0.15	0.06	0.20	0.09
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.10**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**0.1**	**0.04**	**1.80**	**0.75**	**2.75**	**1.19**
Other-Specify	**2.9**	**1.30**	**2.90**	**1.21**	**1.75**	**0.76**
Total	**223.15**	**100.00**	**238.70**	**100.00**	**230.81**	**100.00**

Table D-4: Daviess County Landfill Data (Washington)						
	#4(07/21/09)		#5(07/21/09)		#6(07/23/09)	
Weather	sunny		sunny		cloudy	
Origin	truck Z7, north Daviess		N/A		truck 103	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**25.97**		**28.25**		**23.27**
OCC and Kraft bags	14.15	6.22	13.10	5.56	11.05	4.68
Newspaper	12.80	5.62	9.55	4.05	5.95	2.52
Magazines	0.50	0.22	0.65	0.28	4.00	1.69
High Grade/Office	10.45	4.59	10.20	4.33	12.85	5.44
Mixed Recyclable Paper (including Books, Boxboard)	5.65	2.48	2.05	0.87	3.50	1.48
Compostable Paper	14.25	6.26	30.15	12.80	15.45	6.54
Other Non-recyclable, Non-compostable Paper	1.30	0.57	0.85	0.36	2.20	0.93
Plastic		**20.08**		**17.91**		**12.71**
#1 PET Non-Deposit Beverage Containers	5.70	2.50	1.05	0.45	3.25	1.38
#1 PET Deposit Beverage Containers	1.90	0.83	2.95	1.25	2.00	0.85
#1 PET All Other Containers	1.10	0.48	0.55	0.23	1.40	0.59
#2 HDPE Containers	7.85	3.45	2.95	1.25	2.00	0.85
# 6 Styrofoam	2.55	1.12	0.60	0.25	0.95	0.40
All Other Numbered Containers (#3,4,5,6,7)	2.40	1.05	1.25	0.53	1.00	0.42
Other Plastic – NOT Numbered	14.30	6.28	14.45	6.13	7.65	3.24
Film/Wrap/Bags	9.90	4.35	18.40	7.81	11.80	4.99
Metal		**6.15**		**3.84**		**1.10**
Aluminum Non-Deposit Beverage Containers	3.25	1.43	0.75	0.32	0.20	0.08
Aluminum Deposit Beverage Containers	0.10	0.04	0.20	0.08	0.35	0.15
Aluminum All Other Containers	1.05	0.46	0.25	0.11	0.05	0.02
Other Non-Ferrous Scrap	0.70	0.31	1.15	0.49	0.40	0.17
Ferrous Food & Beverage Containers	5.05	2.22	1.45	0.62	1.35	0.57
Other Ferrous Scrap	3.85	1.69	5.25	2.23	0.25	0.11
Glass		**4.44**		**3.29**		**1.52**
Clear	5.85	2.57	5.45	2.31	3.20	1.35
Green	3.75	1.65	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	0.50	0.22	2.30	0.98	0.40	0.17
Yard Waste	**9.05**	**3.98**	**22.85**	**9.70**	**62.05**	**26.25**

Table D-4: Daviess County Landfill Data (Washington)						
	#4(07/21/09)		#5(07/21/09)		#6(07/23/09)	
Weather	sunny		sunny		cloudy	
Origin	truck Z7, north Daviess		N/A		truck 103	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**46.35**	**20.36**	**15.85**	**6.73**	**35.80**	**15.15**
Wood		**3.25**		**1.00**		**0.04**
Non-Treated Wood	0.00	0.00	0.00	0.00	0.00	0.00
Treated Wood	7.40	3.25	2.35	1.00	0.10	0.04
Demolition/Renovation/ Construction Debris	**4.90**	**2.15**	**0.00**	**0.00**	**0.00**	**0.00**
Durables		**0.24**		**23.96**		**0.00**
All Electrical & Household Appliances	0.55	0.24	13.35	5.67	0.00	0.00
Central Processing Units/Peripherals	0.00	0.00	13.85	5.88	0.00	0.00
Computer Monitors/TV's	0.00	0.00	29.25	12.42	0	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**10.50**	**4.61**	**3.10**	**1.32**	**27.45**	**11.61**
Diapers	**14.00**	**6.15**	**4.90**	**2.08**	**13.50**	**5.71**
Rubbers	**0.05**	**0.02**	**0.10**	**0.04**	**2.90**	**1.23**
Household hazardous Materials		**0.42**		**0.57**		**0.06**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	1.35	0.57	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.75	0.33	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.20	0.09	0.00	0.00	0.15	0.06
Batteries (Other)	0.00	0.00	0.00	0.00	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.00**	**0.00**	**0.75**	**0.32**	**0.00**	**0.00**
Fines/Supermix	**1.10**	**0.48**	**1.70**	**0.72**	**0.50**	**0.21**
Other-Specify	**3.85**	**1.69**	**0.65**	**0.28**	**2.65**	**1.12**
Total	**227.60**	**100.00**	**235.60**	**100.00**	**236.35**	**100.00**

Table D-4: Daviess County Landfill Data (Washington)						
	#7(07/23/09)		#8(07/24/09)		#9(07/24/09)	
Weather	cloudy, partially sunny		sunny, windy		sunny, windy	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**30.64**		**30.45**		**21.65**
OCC and Kraft bags	13.20	5.98	22.35	9.78	19.05	8.37
Newspaper	8.15	3.69	11.70	5.12	2.45	1.08
Magazines	7.20	3.26	1.65	0.72	6.50	2.85
High Grade/Office	16.70	7.57	10.90	4.77	6.85	3.01
Mixed Recyclable Paper (including Books, Boxboard)	6.05	2.74	2.65	1.16	3.60	1.58
Compostable Paper	14.35	6.50	15.35	6.72	8.55	3.75
Other Non-recyclable, Non-compostable Paper	1.95	0.88	5.00	2.19	2.30	1.01
Plastic		**23.69**		**13.39**		**21.23**
#1 PET Non-Deposit Beverage Containers	3.45	1.56	0.05	0.02	0.80	0.35
#1 PET Deposit Beverage Containers	5.25	2.38	2.25	0.98	5.90	2.59
#1 PET All Other Containers	3.15	1.43	2.55	1.12	2.85	1.25
#2 HDPE Containers	7.55	3.42	1.60	0.70	5.85	2.57
# 6 Styrofoam	2.90	1.31	1.70	0.74	2.65	1.16
All Other Numbered Containers (#3,4,5,6,7)	2.50	1.13	1.70	0.74	7.40	3.25
Other Plastic – NOT Numbered	13.40	6.07	6.60	2.89	7.40	3.25
Film/Wrap/Bags	14.05	6.37	14.15	6.19	15.50	6.81
Metal		**5.05**		**8.88**		**12.69**
Aluminum Non-Deposit Beverage Containers	3.35	1.52	1.30	0.57	2.15	0.94
Aluminum Deposit Beverage Containers	0.70	0.32	0.60	0.26	0.60	0.26
Aluminum All Other Containers	0.10	0.05	0.10	0.04	0.05	0.02
Other Non-Ferrous Scrap	1.55	0.70	8.95	3.92	1.05	0.46
Ferrous Food & Beverage Containers	3.85	1.75	3.65	1.60	4.25	1.87
Other Ferrous Scrap	1.60	0.73	5.70	2.49	20.80	9.13
Glass		**2.22**		**5.67**		**2.15**
Clear	1.45	0.66	10.45	4.57	3.05	1.34
Green	0.20	0.09	0.80	0.35	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	3.25	1.47	1.70	0.74	1.85	0.81
Yard Waste	**3.95**	**1.79**	**18.30**	**8.01**	**2.90**	**1.27**

Table D-4: Daviess County Landfill Data (Washington)						
	#7(07/23/09)		#8(07/24/09)		#9(07/24/09)	
Weather	cloudy, partially sunny		sunny, windy		sunny, windy	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**32.95**	**14.94**	**21.50**	**9.41**	**19.30**	**8.48**
Wood		**2.11**		**1.58**		**0.31**
Non-Treated Wood	0.00	0.00	0.00	0.00	0.00	0.00
Treated Wood	4.65	2.11	3.60	1.58	0.7	0.31
Demolition/Renovation/ Construction Debris	**2.50**	**1.13**	**0.00**	**0.00**	**8.55**	**3.75**
Durables		**0.02**		**0.39**		**1.08**
All Electrical & Household Appliances	0.00	0.00	0.00	0.00	2.45	1.08
Central Processing Units/Peripherals	0.00	0.00	0.90	0.39	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0	0.00	0.00	0.00
Cell Phones	0.05	0.02	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**14.80**	**6.71**	**15.55**	**6.80**	**14.2**	**6.24**
Diapers	**8.65**	**3.92**	**15.20**	**6.65**	**41.4**	**18.18**
Rubbers	**1.05**	**0.48**	**10.95**	**4.79**	**0.10**	**0.04**
Household hazardous Materials		**0.97**		**0.20**		**0.81**
Oil Filters	1.60	0.73	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0	0.00	1.45	0.64
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.55	0.25	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.00	0.00	0.05	0.02
Mercury Containing Products	0.00	0.00	0.00	0.00	0.35	0.15
Other (HHM Containers with Product Inside)	0.00	0.00	0.45	0.20	0.00	0.00
Sharps	**0.00**	**0.00**	**0.10**	**0.04**	**0.25**	**0.11**
Fines/Supermix	**5.30**	**2.40**	**0.85**	**0.37**	**3.7**	**1.62**
Other-Specify	**8.65**	**3.92**	**7.70**	**3.37**	**0.85**	**0.37**
Total	**220.60**	**100.00**	**228.55**	**100.00**	**227.70**	**100.00**

Table D-4: Daviess County Landfill Data (Washington)						
	#10(07/27/09)		#11(07/27/09)		#12(07/27/09)	
Weather	sunny, hot, sizzling		partially sunny		partially cloudy, hot	
Origin	truck 102		truck 105		truck V4	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**30.50**		**32.75**		**23.84**
OCC and Kraft bags	13.75	5.94	23.30	10.09	18.85	8.93
Newspaper	19.25	8.31	11.35	4.91	8.55	4.05
Magazines	12.50	5.40	7.65	3.31	2.50	1.18
High Grade/Office	6.90	2.98	9.75	4.22	4.95	2.35
Mixed Recyclable Paper (including Books, Boxboard)	3.50	1.51	4.50	1.95	5.10	2.42
Compostable Paper	11.80	5.09	11.15	4.83	8.75	4.15
Other Non-recyclable, Non-compostable Paper	2.95	1.27	7.95	3.44	1.60	0.76
Plastic		**12.04**		**16.52**		**14.99**
#1 PET Non-Deposit Beverage Containers	1.35	0.58	1.05	0.45	5.00	2.37
#1 PET Deposit Beverage Containers	1.40	0.60	1.80	0.78	3.40	1.61
#1 PET All Other Containers	1.80	0.78	1.40	0.61	2.75	1.30
#2 HDPE Containers	4.25	1.83	9.65	4.18	2.30	1.09
# 6 Styrofoam	2.20	0.95	2.40	1.04	1.30	0.62
All Other Numbered Containers (#3,4,5,6,7)	1.65	0.71	3.00	1.30	2.75	1.30
Other Plastic – NOT Numbered	5.75	2.48	7.10	3.07	3.73	1.77
Film/Wrap/Bags	9.50	4.10	11.75	5.09	10.40	4.93
Metal		**3.56**		**3.16**		**3.72**
Aluminum Non-Deposit Beverage Containers	1.15	0.50	1.20	0.52	1.90	0.90
Aluminum Deposit Beverage Containers	0.40	0.17	0.60	0.26	0.60	0.28
Aluminum All Other Containers	0.40	0.17	0.00	0.00	0.05	0.02
Other Non-Ferrous Scrap	0.70	0.30	0.50	0.22	0.55	0.26
Ferrous Food & Beverage Containers	2.90	1.25	2.60	1.13	4.25	2.01
Other Ferrous Scrap	2.70	1.17	2.40	1.04	0.50	0.24
Glass		**3.09**		**8.33**		**7.92**
Clear	2.00	0.86	15.25	6.60	5.10	2.42
Green	0.80	0.35	0.45	0.19	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	4.35	1.88	3.55	1.54	11.60	5.50
Yard Waste	**22.45**	**9.69**	**8.35**	**3.61**	**5.80**	**2.75**

Table D-4: Daviess County Landfill Data (Washington)						
	#10(07/27/09)		#11(07/27/09)		#12(07/27/09)	
Weather	sunny, hot, sizzling		partially sunny		partially cloudy, hot	
Origin	truck 102		truck 105		truck V4	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**33.40**	**14.42**	**48.95**	**21.19**	**30.95**	**14.67**
Wood		**0.99**		**0.19**		**0.24**
Non-Treated Wood	1.95	0.84	0.40	0.17	0.15	0.07
Treated Wood	0.35	0.15	0.05	0.02	0.35	0.17
Demolition/Renovation/ Construction Debris	**29.50**	**12.73**	**0.90**	**0.39**	**0.00**	**0.00**
Durables		**0.00**		**0.00**		**0.47**
All Electrical & Household Appliances	0.00	0.00	0.00	0.00	1.00	0.47
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**6.20**	**2.68**	**25**	**10.82**	**20.50**	**9.72**
Diapers	**12.50**	**5.40**	**0**	**0.00**	**44.20**	**20.95**
Rubbers	**0.25**	**0.11**	**0.00**	**0.00**	**0.00**	**0.00**
Household hazardous Materials		**3.41**		**2.06**		**0.00**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	4.75	2.06	0.00	0.00
Pesticides, Herbicides, Fungicides	7.90	3.41	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.00	0.00	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.05**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**2.50**	**1.08**	**1.4**	**0.61**	**1.55**	**0.73**
Other-Specify	**0.65**	**0.28**	**0.85**	**0.37**	**0.00**	**0.00**
Total	**231.65**	**100.00**	**231.00**	**100.00**	**210.98**	**100.00**

Table D-4: Daviess County Landfill Data (Washington)						
	#13(07/31/09)		#14(07/31/09)		#15(08/03/09)	
Weather	sunny, windy		sunny		sunny, hot	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**18.31**		**25.13**		**35.39**
OCC and Kraft bags	24.80	12.25	18.95	8.89	39.00	16.63
Newspaper	1.70	0.84	4.78	2.24	6.85	2.92
Magazines	1.10	0.54	1.80	0.84	6.25	2.66
High Grade/Office	0.65	0.32	15.20	7.13	15.80	6.74
Mixed Recyclable Paper (including Books, Boxboard)	2.45	1.21	3.65	1.71	3.90	1.66
Compostable Paper	5.65	2.79	6.65	3.12	9.00	3.84
Other Non-recyclable, Non-compostable Paper	0.70	0.35	2.55	1.20	2.20	0.94
Plastic		**13.33**		**11.96**		**15.80**
#1 PET Non-Deposit Beverage Containers	0.10	0.05	4.15	1.95	2.40	1.02
#1 PET Deposit Beverage Containers	1.50	0.74	0.65	0.30	4.05	1.73
#1 PET All Other Containers	1.30	0.64	0.65	0.30	1.20	0.51
#2 HDPE Containers	9.05	4.47	4.30	2.02	3.65	1.56
# 6 Styrofoam	1.67	0.83	1.30	0.61	2.55	1.09
All Other Numbered Containers (#3,4,5,6,7)	1.20	0.59	1.30	0.61	2.35	1.00
Other Plastic – NOT Numbered	7.65	3.78	1.70	0.80	11.50	4.90
Film/Wrap/Bags	4.50	2.22	11.45	5.37	9.35	3.99
Metal		**2.84**		**5.46**		**5.22**
Aluminum Non-Deposit Beverage Containers	0.65	0.32	0.30	0.14	1.55	0.66
Aluminum Deposit Beverage Containers	0.30	0.15	0.70	0.33	0.25	0.11
Aluminum All Other Containers	0.00	0.00	0.00	0.00	1.25	0.53
Other Non-Ferrous Scrap	0.15	0.07	0.20	0.09	0.75	0.32
Ferrous Food & Beverage Containers	0.60	0.30	5.15	2.42	3.05	1.30
Other Ferrous Scrap	4.05	2.00	5.30	2.49	5.40	2.30
Glass		**4.22**		**7.48**		**4.26**
Clear	6.15	3.04	13.00	6.10	5.15	2.20
Green	0.00	0.00	0.00	0.00	0.15	0.06
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	2.40	1.19	2.95	1.38	4.70	2.00
Yard Waste	**26.30**	**13.00**	**7.35**	**3.45**	**2.25**	**0.96**

Table D-4: Daviess County Landfill Data (Washington)						
	#13(07/31/09)		#14(07/31/09)		#15(08/03/09)	
Weather	sunny, windy		sunny		sunny, hot	
Origin	N/A		N/A		N/A	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**13.15**	**6.50**	**20.35**	**9.55**	**38.05**	**16.22**
Wood		**0.84**		**3.38**		**7.33**
Non-Treated Wood	0.00	0.00	0.15	0.07	0.00	0.00
Treated Wood	1.70	0.84	7.05	3.31	17.20	7.33
Demolition/Renovation/ Construction Debris	**37.60**	**18.58**	**8.65**	**4.06**	**3.60**	**1.53**
Durables		**9.64**		**7.13**		**2.68**
All Electrical & Household Appliances	19.50	9.64	10.10	4.74	5.64	2.40
Central Processing Units/Peripherals	0.00	0.00	5.10	2.39	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.65	0.28
Textiles & Leathers	**20.95**	**10.35**	**35.15**	**16.49**	**18.60**	**7.93**
Diapers	**2.60**	**1.28**	**7.96**	**3.73**	**1.60**	**0.68**
Rubbers	**0.00**	**0.00**	**0.00**	**0.00**	**0.10**	**0.04**
Household hazardous Materials		**0.10**		**0.00**		**0.28**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.20	0.10	0.00	0.00	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.00	0.00	0.10	0.04
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.55	0.23
Sharps	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**1.30**	**0.64**	**1.95**	**0.91**	**3.65**	**1.56**
Other-Specify	**0.75**	**0.37**	**2.7**	**1.27**	**0.25**	**0.11**
Total	**202.37**	**100.00**	**213.19**	**100.00**	**234.54**	**100.00**

Table D-4: Daviess County Landfill Data (Washington)						
	#16(08/04/09)		#17(08/04/09)		#18(08/05/09)	
Weather	cloudy, humid		cloudy, humid, hot		sunny	
Origin	truck 102		truck 103		truck V4	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper		**24.79**		**32.76**		**32.41**
OCC and Kraft bags	14.95	6.57	38.50	15.18	17.35	7.63
Newspaper	4.95	2.18	12.10	4.77	9.80	4.31
Magazines	0.75	0.33	5.65	2.23	9.05	3.98
High Grade/Office	12.85	5.65	9.80	3.86	16.00	7.04
Mixed Recyclable Paper (including Books, Boxboard)	4.95	2.18	3.00	1.18	3.60	1.58
Compostable Paper	16.90	7.43	10.15	4.00	11.60	5.10
Other Non-recyclable, Non-compostable Paper	1.05	0.46	3.90	1.54	6.30	2.77
Plastic		**15.71**		**12.14**		**21.48**
#1 PET Non-Deposit Beverage Containers	5.40	2.37	1.70	0.67	5.50	2.42
#1 PET Deposit Beverage Containers	3.25	1.43	3.75	1.48	1.65	0.73
#1 PET All Other Containers	1.00	0.44	1.20	0.47	1.75	0.77
#2 HDPE Containers	2.20	0.97	5.60	2.21	6.30	2.77
# 6 Styrofoam	2.20	0.97	1.55	0.61	1.95	0.86
All Other Numbered Containers (#3,4,5,6,7)	2.15	0.94	2.60	1.03	2.20	0.97
Other Plastic – NOT Numbered	4.60	2.02	3.55	1.40	15.60	6.86
Film/Wrap/Bags	14.95	6.57	10.85	4.28	13.90	6.11
Metal		**4.44**		**3.47**		**4.66**
Aluminum Non-Deposit Beverage Containers	0.80	0.35	3.00	1.18	1.00	0.44
Aluminum Deposit Beverage Containers	0.35	0.15	1.15	0.45	0.20	0.09
Aluminum All Other Containers	0.25	0.11	0.55	0.22	0.60	0.26
Other Non-Ferrous Scrap	0.05	0.02	0.10	0.04	0.35	0.15
Ferrous Food & Beverage Containers	2.40	1.05	1.20	0.47	3.60	1.58
Other Ferrous Scrap	6.25	2.75	2.80	1.10	4.85	2.13
Glass		**3.82**		**7.12**		**4.38**
Clear	4.00	1.76	10.25	4.04	3.75	1.65
Green	0.00	0.00	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	4.70	2.07	7.80	3.08	6.20	2.73
Yard Waste	**4.70**	**2.07**	**12.45**	**4.91**	**12.90**	**5.67**

Table D-4: Daviess County Landfill Data (Washington)						
	#16(08/04/09)		#17(08/04/09)		#18(08/05/09)	
Weather	cloudy, humid		cloudy, humid, hot		sunny	
Origin	truck 102		truck 103		truck V4	
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Food Waste	**49.50**	**21.75**	**47.35**	**18.67**	**48.69**	**21.41**
Wood		**3.56**		**0.16**		**0.24**
Non-Treated Wood	0.35	0.15	0.00	0.00	0.00	0.00
Treated Wood	7.75	3.41	0.40	0.16	0.55	0.24
Demolition/Renovation/ Construction Debris	**0.05**	**0.02**	**0.00**	**0.00**	**5.55**	**2.44**
Durables		**12.39**		**0.20**		**1.52**
All Electrical & Household Appliances	0.00	0.00	0.50	0.20	3.45	1.52
Central Processing Units/Peripherals	28.20	12.39	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00	0.00	0.00
Textiles & Leathers	**19.70**	**8.66**	**34.05**	**13.42**	**8.65**	**3.80**
Diapers	**0.40**	**0.18**	**15.20**	**5.99**	**0.30**	**0.13**
Rubbers	**0.40**	**0.18**	**0.10**	**0.04**	**0.00**	**0.00**
Household hazardous Materials		**0.00**		**0.14**		**0.44**
Oil Filters	0.00	0.00	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0.25	0.10	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00	0.45	0.20
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00	0.55	0.24
Batteries (Other)	0.00	0.00	0.10	0.04	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	0.00	0.00	0.00	0.00	0.00	0.00
Sharps	**0.10**	**0.04**	**0.20**	**0.08**	**0.00**	**0.00**
Fines/Supermix	**5.05**	**2.22**	**1.45**	**0.57**	**1.55**	**0.68**
Other-Specify	**0.40**	**0.18**	**0.85**	**0.34**	**1.65**	**0.73**
Total	**227.55**	**100.00**	**253.65**	**100.00**	**227.39**	**100.00**

Table D-4: Daviess County Landfill Data (Washington)				
	#19(08/05/09)		#20(08/05/09)	
Weather	cloudy, humid		cloudy	
Origin	truck 107		N/A	
Categories	**Material**	**%**	**Material**	**%**
Paper		**40.42**		**35.85**
OCC and Kraft bags	54.30	22.60	30.68	14.49
Newspaper	2.75	1.14	7.10	3.35
Magazines	7.05	2.93	4.55	2.15
High Grade/Office	13.85	5.77	11.46	5.41
Mixed Recyclable Paper (including Books, Boxboard)	6.55	2.73	4.20	1.98
Compostable Paper	7.90	3.29	13.98	6.60
Other Non-recyclable, Non-compostable Paper	4.70	1.96	3.92	1.85
Plastic		**14.94**		**16.07**
#1 PET Non-Deposit Beverage Containers	1.60	0.67	1.95	0.92
#1 PET Deposit Beverage Containers	1.70	0.71	2.08	0.98
#1 PET All Other Containers	0.80	0.33	1.60	0.76
#2 HDPE Containers	3.30	1.37	5.52	2.61
# 6 Styrofoam	1.85	0.77	1.82	0.86
All Other Numbered Containers (#3,4,5,6,7)	0.85	0.35	1.67	0.79
Other Plastic – NOT Numbered	15.10	6.29	10.60	5.01
Film/Wrap/Bags	10.70	4.45	8.78	4.15
Metal		**10.51**		**5.47**
Aluminum Non-Deposit Beverage Containers	0.60	0.25	0.48	0.23
Aluminum Deposit Beverage Containers	0.45	0.19	0.78	0.37
Aluminum All Other Containers	0.30	0.12	0.10	0.05
Other Non-Ferrous Scrap	1.45	0.60	3.15	1.49
Ferrous Food & Beverage Containers	2.30	0.96	3.22	1.52
Other Ferrous Scrap	20.15	8.39	3.85	1.82
Glass		**1.19**		**7.47**
Clear	2.85	1.19	6.83	3.23
Green	0.00	0.00	0.78	0.37
Blue	0.00	0.00	0.00	0.00
Brown	0.00	0.00	8.20	3.87
Yard Waste	**3.95**	**1.64**	**16.53**	**7.81**
Food Waste	**20.99**	**8.74**	**14.50**	**6.85**

Table D-4: Daviess County Landfill Data (Washington)				
	#19(08/05/09)		#20(08/05/09)	
Weather	cloudy, humid		cloudy	
Origin	truck 107		N/A	
Categories	**Material**	**%**	**Material**	**%**
Wood		**7.45**		**0.96**
Non-Treated Wood	0.10	0.04	0.00	0.00
Treated Wood	17.80	7.41	2.03	0.96
Demolition/Renovation/ Construction Debris	**0.35**	**0.15**	**2.50**	**1.18**
Durables		**0.96**		**0.00**
All Electrical & Household Appliances	2.30	0.96	0.00	0.00
Central Processing Units/Peripherals	0.00	0.00	0.00	0.00
Computer Monitors/TV's	0.00	0.00	0.00	0.00
Cell Phones	0.00	0.00	0.00	0.00
Other (Furniture & Furnishings)	0.00	0.00	0.00	0.00
Textiles & Leathers	**16.10**	**6.70**	**21.13**	**9.98**
Diapers	**1.85**	**0.77**	**11.08**	**5.23**
Rubbers	**0.15**	**0.06**	**1.98**	**0.94**
Household hazardous Materials		**4.29**		**0.00**
Oil Filters	0.00	0.00	0.00	0.00
Paints & Solvents	0.00	0.00	0.00	0.00
Pesticides, Herbicides, Fungicides	0.00	0.00	0.00	0.00
Household Cleaners	0.00	0.00	0.00	0.00
Batteries (Lead-Acid)	0.00	0.00	0.00	0.00
Batteries (Other)	0.00	0.00	0.00	0.00
Mercury Containing Products	0.00	0.00	0.00	0.00
Other (HHM Containers with Product Inside)	10.30	4.29	0.00	0.00
Sharps	**0.00**	**0.00**	**0.00**	**0.00**
Fines/Supermix	**1.35**	**0.56**	**3.9**	**1.84**
Other-Specify	**3.90**	**1.62**	**0.75**	**0.35**
Total	**240.24**	**100.00**	**211.70**	**100.00**

Table D-4: Daviess County Landfill Data (Washington)						
	By Total Weight of Samples		By Ave %		Confidence Interval	
	Total Value of 20 Samples		**Average value of 20 samples**		**Lower Bound**	**Upper Bound**
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Paper	**1338.47**	**29.40**	**66.92**	**29.29**	**27.08**	**31.51**
OCC and Kraft bags	478.38	10.51	23.92	10.48	8.33	12.64
Newspaper	170.13	3.74	8.51	3.71	2.94	4.48
Magazines	95.30	2.09	4.77	2.07	1.48	2.67
High Grade/Office	212.91	4.68	10.65	4.66	3.93	5.39
Mixed Recyclable Paper (including Books, Boxboard)	79.55	1.75	3.98	1.75	1.53	1.97
Compostable Paper	245.93	5.40	12.30	5.39	4.51	6.26
Other Non-recyclable, Non-compostable Paper	56.27	1.24	2.81	1.23	0.90	1.56
Plastic	**748.28**	**16.43**	**37.41**	**16.45**	**15.06**	**17.84**
#1 PET Non-Deposit Beverage Containers	53.71	1.18	2.69	1.19	0.86	1.51
#1 PET Deposit Beverage Containers	52.43	1.15	2.62	1.15	0.92	1.38
#1 PET All Other Containers	32.15	0.71	1.61	0.71	0.56	0.86
#2 HDPE Containers	98.47	2.16	4.92	2.18	1.76	2.61
# 6 Styrofoam	39.44	0.87	1.97	0.87	0.76	0.97
All Other Numbered Containers (#3,4,5,6,7)	44.07	0.97	2.20	0.97	0.74	1.20
Other Plastic – NOT Numbered	188.68	4.14	9.43	4.14	3.34	4.95
Film/Wrap/Bags	239.33	5.26	11.97	5.24	4.73	5.75
Metal	**239.18**	**5.25**	**11.96**	**5.24**	**4.18**	**6.30**
Aluminum Non-Deposit Beverage Containers	28.58	0.63	1.43	0.62	0.45	0.80
Aluminum Deposit Beverage Containers	13.48	0.30	0.67	0.29	0.20	0.38
Aluminum All Other Containers	5.45	0.12	0.27	0.12	0.06	0.18
Other Non-Ferrous Scrap	22.55	0.50	1.13	0.50	0.16	0.84
Ferrous Food & Beverage Containers	65.67	1.44	3.28	1.45	1.18	1.72
Other Ferrous Scrap	103.45	2.27	5.17	2.26	1.34	3.17
Glass	**217.11**	**4.77**	**10.86**	**4.79**	**3.91**	**5.67**
Clear	124.23	2.73	6.21	2.74	2.09	3.38
Green	10.83	0.24	0.54	0.24	0.07	0.41
Blue	0.00	0.00	0.00	0.00	0.00	0.00
Brown	82.05	1.80	4.10	1.82	1.31	2.33
Yard Waste	**278.53**	**6.12**	**13.93**	**6.10**	**3.76**	**8.44**
Food Waste	**634.38**	**13.93**	**31.72**	**13.84**	**11.85**	**15.83**

Table D-4: Daviess County Landfill Data (Washington)						
	By Total Weight of Samples		By Ave %		Confidence Interval	
	Total Value of 20 Samples		**Average value of 20 samples**		**Lower Bound**	**Upper Bound**
Categories	**Material**	**%**	**Material**	**%**	**Material**	**%**
Wood	**97.23**	**2.14**	**4.86**	**2.11**	**1.24**	**2.98**
Non-Treated Wood	5.15	0.11	0.26	0.11	0.01	0.21
Treated Wood	92.08	2.02	4.60	2.00	1.13	2.87
Demolition/Renovation/ Construction Debris	**105.75**	**2.32**	**5.29**	**2.43**	**0.58**	**4.28**
Durables	**142.04**	**3.12**	**7.10**	**3.15**	**0.82**	**5.47**
All Electrical & Household Appliances	63.84	1.40	3.19	1.45	0.49	2.42
Central Processing Units/Peripherals	48.05	1.06	2.40	1.05	0.00	2.22
Computer Monitors/TV's	29.25	0.64	1.46	0.62	0.00	1.69
Cell Phones	0.25	0.01	0.01	0.01	0.00	0.01
Other (Furniture & Furnishings)	0.65	0.01	0.03	0.01	0.00	0.04
Textiles & Leathers	**356.13**	**7.82**	**17.81**	**7.86**	**6.37**	**9.35**
Diapers	**249.24**	**5.47**	**12.46**	**5.52**	**3.37**	**7.67**
Rubbers	**18.23**	**0.40**	**0.91**	**0.40**	**0.00**	**0.82**
Household hazardous Materials	**39.10**	**0.86**	**1.96**	**0.84**	**0.37**	**1.30**
Oil Filters	1.60	0.04	0.08	0.04	0.00	0.10
Paints & Solvents	14.40	0.32	0.72	0.31	0.07	0.55
Pesticides, Herbicides, Fungicides	7.90	0.17	0.40	0.17	0.00	0.47
Household Cleaners	1.75	0.04	0.09	0.04	0.00	0.08
Batteries (Lead-Acid)	0.90	0.02	0.05	0.02	0.00	0.04
Batteries (Other)	0.90	0.02	0.05	0.02	0.01	0.03
Mercury Containing Products	0.35	0.01	0.02	0.01	0.00	0.02
Other (HHM Containers with Product Inside)	11.30	0.25	0.57	0.24	0.00	0.61
Sharps	**1.55**	**0.03**	**0.08**	**0.03**	**0.00**	**0.06**
Fines/Supermix	**43.45**	**0.95**	**2.17**	**0.96**	**0.71**	**1.21**
Other-Specify	**44.65**	**0.98**	**2.23**	**0.98**	**0.58**	**1.39**
Total	**4553.32**	**100.00**	**227.67**	**100.00**	**100.00**	**100.00**

Appendix E. Description of Calculation and Statistical Procedures

Data from facility tonnage reports and the sorting of waste samples was analyzed to yield estimates of percentages and tonnages of material types in Indiana's MSW stream. This section describes the methodology used to obtain each estimate and its associated confidence interval (error range).

Estimating the Composition Based on Sampling

For a giving site, the composition estimates represent the ratio of the components' weight to the total waste for each participating facility. They were derived by summing each component's weight across all of the selected records and dividing by the sum of the total weight of waste, as shown in the following equation:

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

Where:

c = weight of particular component

w = sum of all component weights

for *i* = 1 to *n*, where *n* = number of selected samples

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

The confidence interval for this estimate was derived in two steps. First, the variance around the estimate was 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,

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

Second, precision levels at the 90 percent confidence level were 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.