

INTERIM REPORT

WASTE CHARACTERIZATION STUDY RESULTS OF FIRST ROUND OF SAMPLING

Final
July 9, 2009

Introduction

The State of Connecticut Department of Environmental Protection (CTDEP) commissioned a composition and characterization study of municipal solid waste (MSW) generated within the State of Connecticut. The primary purpose of the Statewide Waste Characterization Study (Study) is to estimate the composition of disposed Municipal Solid Waste (MSW) from residential and Industrial/Commercial/Institutional (ICI) disposed MSW. The resultant data will help guide CTDEP as it embarks on an effort to boost the disposal diversion rate, currently estimated at 30 percent, up to a rate of 58 percent.

This Study is being carried out by a Project Team consisting of DSM Environmental Services, Inc., Cascadia Consulting Group, and MSW Consultants. The roles of each firm are summarized below.

DSM Environmental Services, Inc. coordinates the Project Team in all activities and has primary responsibilities for:

- Project Management
- Logistics
- Sample Site Selection
- Client Contact
- Problem Resolution
- Preparation of the Draft and Final Report

Cascadia Consulting Group is responsible for:

- Preparation of Draft and Final Study Design
- Overall QA/QC effort
- Statistical Analysis
- Report Tables Preparation
- Report Review

MSW Consultants is responsible for:

- Field Supervision
- On-site Logistics
- Sampling and Sorting
- Sort Crew Training
- Sorting QA/QC
- Compilation of Sorting Data

CTDEP does not collect or maintain data on state-wide quantities of ICI waste versus residential waste. Therefore the Study included surveying to estimate the breakdown between residential and ICI waste. However CTDEP recognizes that limited resources are available for this effort so that the resulting allocation will be a rough approximation based on limited surveying at sites where sampling is occurring.

The study is being carried out over the course of two seasons, with waste sampling activities occurring at five permitted solid waste facilities throughout the State. This Interim Report presents the results of the first round of sampling and analysis.

Study Design

DSM Environmental Services, Inc. (DSM) met with CTDEP on December 4, 2008 to kick off the Study. CTDEP agreed at the kickoff meeting to select the five facilities for sampling that CTDEP believed would be representative of statewide waste composition. Ultimately CTDEP selected the following five facilities for sampling:

1. **Bristol Resource Recovery Facility:** 650 TPD mass burn WTE facility located in Bristol, CT and owned and operated by Covanta Bristol, Inc. 16 municipalities send waste to this facility. They are located to the west of the Mid-CT project listed below.
2. **CRRA Mid-CT Project (Hartford):** 2850 TPD RDF facility operated by CRRA, with resulting fuel conveyed to an adjacent power plant operated by Covanta. The CRRA Mid-CT project accepts waste from 70 municipalities around Hartford, CT.
3. **CRRA Southeast Project (Preston):** 690 TPD mass burn WTE facility serving communities in southeastern CT around Preston, CT. CRRA owns this facility which is operated by Covanta.
4. **New Haven Transfer Station:** owned by the New Haven Solid Waste and Recycling Authority: Privately operated (under contract) 700 TPD facility accepting MSW and C&D wastes.
5. **Wheelabrator Bridgeport:** 2250 TPD mass burn WTE facility owned and operated by Wheelabrator Bridgeport, L.P. serving the greater Bridgeport area. Note that for this facility especially, only waste generated in CT will be selected for sampling.

Once the five facilities had been selected the Project Team prepared a Final Study Design describing the sampling and analysis procedure and the final definition of materials for sorting. The Final Study Design was submitted to CTDEP in January, 2009 for review, and was finalized in February, 2009 based on comments from CTDEP.

Logistics

Once the Final Study Design was completed the Project Team worked with the selected facilities to collect the following facility specific logistical information necessary to develop the sampling plan:

- The facility's contact information
- The facility's days and hours of operation
- Vehicle traffic expected for each sector on each day of the week, and the estimated peak time of day for each type of load

- What recycling or recovery operations exist at the facility, and how the Project Team could effectively obtain samples of waste prior to any diversionary measures
- Unusual conditions (e.g., weather, anomalies in traffic patterns, etc.) that might affect data collection and necessitate special logistical arrangements
- Procedure used to determine the net weight of vehicles (e.g. reliance on scale house records or use of net weight cards)
- The facility's ability to provide assistance (e.g. front loader, sorting space, vehicle selection, etc.)

Communication with Disposal Sites

Following the data requests site visits were scheduled at each facility. The site visits served the following crucial functions:

- Introduced the Study objectives to the Facility Manager, and introduced the waste sort Field Supervisor, and the truck surveyor to facility personnel;
- Clarified information provided in response to the information request;
- Finalized locations for setting up the work area, taking samples, queuing samples, discarding sorted samples, and other in-process activities;
- Confirmed procedures requiring coordination between the host facility personnel and the Project Team;
- Reviewed facility-specific health and safety procedures and emergency contact numbers;
- Established the procedure for surveying of in-coming trucks to allocate waste between residential and ICI loads;
- Answered any questions or concerns of the Facility Manager; and,
- Established tentative dates for surveying and sampling.

Ultimately surveying and sampling occurred on the following dates:

Bristol Resource Recovery Facility	2/25 - 2/27/2009
Wheelabrator Bridgeport	2/27 - 3/3/2009
New Haven Transfer Station	3/3 - 3/5/2009
CRRRA Southeast Project (Preston)	3/5 - 3/9/2009
CRRRA Mid-CT Project (Hartford)	3/9 - 3/11/2009

Allocation of Residential and ICI Waste, By Facility

One of the key elements of the Study is to define what percent of MSW delivered to Connecticut disposal facilities is residential MSW and what percent is ICI MSW. The percent which is residential versus ICI will be used to allocate statewide disposed MSW tonnage, which in turn will be multiplied by the MSW composition (expressed as a percent by material type) to estimate total quantities of each type of MSW.

CT DEP does not collect data on the percent of MSW disposed in Connecticut which is ICI MSW versus residential MSW. Therefore, DSM conducted one day of hauler surveys at each facility where sorting took place to develop rough estimates of the breakdown between ICI MSW and residential MSW. These hauler surveys were used to allocate residential and ICI MSW by facility, and will be used to assess the allocation of sampling during the second round of MSW characterization, and then to allocate statewide disposed MSW quantities provided by CT DEP between ICI and residential MSW.

Definition of Waste Sectors

Sectors of the MSW stream analyzed in the study are defined as follows:

- **Residential** – defined as waste brought to CTDEP facilities by commercially or municipally operated vehicles, in which 80% or more of the waste is from single-family and/or multifamily residential sources. Vehicles chosen for sampling in the Residential waste sector will include **Residential Transfer Trucks** arriving from rural transfer stations as well as **Packer Trucks** carrying waste from single family routes.
- **Institutional/Commercial/Industrial (ICI)** – defined as waste brought to CTDEP facilities by commercially operated vehicles, in which 80% or more of the waste is from institutional, commercial, or industrial sources. This sector excludes Construction and Demolition debris as well as Bulky Waste. Vehicles chosen for sampling in the ICI sector will include **Compacted Drop Boxes** and **Packer Trucks**.
- **Unacceptable Loads** – Loads that contain less than 80% of either residential or ICI waste, and loads originating from outside of Connecticut.

Survey Methodology

DSM and MSW Consultants scheduled meetings with facilities managers at the five locations where the MSW sorts were planned. The meetings were held prior to surveying the trucks and sorting the MSW to review logistics and safety guidelines of each facility.

DSM then conducted hauler surveys during one of the three days that MSW Consultants was carrying out the MSW sort at each facility. The scale house was identified as a safe and efficient place to conduct the surveys. In all cases the drivers had to stop to weigh in and receive a weight ticket which in most cases recorded a net

weight based on the average tare weight for the truck. The survey was conducted when the ticket was handed to them.

The location, date, truck type, time of day, truck number, net weight of waste (total weight minus truck weight) and percentage of ICI or residential MSW was recorded for each truck surveyed. The drivers were first asked to identify the load as ICI or residential. A second question was then asked to determine whether the entire load was either residential or ICI, or whether some portion of the load was a different type of waste. For example, while a driver would typically identify waste collected from dumpsters at a condominium complex or apartment building as "ICI" waste – especially if it were collected as part of an ICI route - that waste is actually residential MSW even though it is collected commercially.

If the driver reported that his load included MSW from condominiums or apartments, then the enumerator would ask the driver to estimate what percent of the MSW on the truck was from condominiums or apartments and what percent was from businesses. Similarly, a driver of a rear loading packer truck typically used to collect residential waste might report that they had collected from some small businesses on the residential route, in which case the driver would be asked to estimate what percent was business waste.

Finally, it should be noted that drivers of the large transfer trailers delivering waste to the surveyed facilities were not surveyed because there was no way for the driver to know what type of waste was in the transfer trailers. This represented a significant amount of the total waste delivered to some surveyed facilities (see below). Fortunately, the New Haven Transfer Station receives a mix of residential and ICI waste, and therefore can be used as a surrogate for estimating the mix of residential and ICI waste delivered in large transfer trailers to other disposal facilities.

Results of Hauler Surveys

A total of 473 solid waste trucks were surveyed over a two week period at five locations. The CRRA Mid-CT facility had the most traffic during survey hours with 199 trucks. The Wheelabrator Bridgeport facility had the least amount of trucks during survey hours, most likely due to a winter storm. Table 1 lists the facilities surveyed, the date of the survey, and total trucks surveyed per facility.

Table 1
Number of Trucks by Location

Location	Date	# Trucks	%
Bristol Resource Recovery Facility	2/25/2009	73	15%
Bridgeport Wheelabrator	3/2/2009	31	7%
New Haven Transfer Station	3/3/2009	57	12%
CRRA Southeast Project (Preston)	3/9/2009	113	24%
CRRA Mid-CT (Hartford)	3/10/2009	199	42%
Total	2 weeks	473	100%

Five different truck types were observed during the surveys. Rear or Side Load Compactor trucks were the largest single truck type, comprising 35% of the trucks surveyed. Tractor trailer trucks pulling (typically) 100 yard trailers comprised the second largest number of trucks. Front loader commercial packers were the third largest number of trucks observed, followed by closed and open-top container roll-off trucks.

Box trucks were occasionally used to deliver specialty waste such as waste from a furniture company. Dump trucks delivered C&D waste/Oversized MSW. Table 2 presents the number of trucks, by truck type surveyed over the five days.

Table 2
Number of Trucks by Truck Type

Truck Type Surveyed	# of Trucks	%
Box Truck	5	1%
Dump Truck	28	6%
Open Top Roll Off 40 yd	33	7%
Closed Roll Off Compactor 40 yd	44	9%
Front End Loader Compactor	98	21%
Tractor Trailer Trucks	99	21%
Rear or Side Load Compactor	166	35%
Total	473	100%

Table 3 presents tonnage, by truck type, delivered to the facilities on the days surveys were conducted. As illustrated by Table 3, Tractor Trailer trucks represented the largest quantity of waste delivered to the five facilities during the time of the surveys, accounting for 44% of the total tonnage. Most of the Tractor Trailer trucks were from Connecticut transfer stations. This category of truck was the hardest to assign a

percentage of ICI or residential waste since most transfer stations in Connecticut receive both waste streams. The drivers pick up the loads when the trailers are full and would not be able to estimate what percentage of ICI or residential waste their truck represents.

**Table 3
Tonnage by Truck Type**

Truck Type Surveyed	Tons	%
Box Truck	9	0%
Dump Truck	33	1%
Open Top Roll Off 40 yd	156	3%
Closed Roll Off Compactor 40 yd	225	5%
Front End Loader Compactor	842	18%
Rear or Side Load Compactor	1307	28%
Tractor Trailer Trucks	2018	44%
Total	4590	100%

Four of the facilities participating in the waste characterization study are disposal facilities. However, the fifth facility, the New Haven Transfer Station, is a transfer station. DSM surveyed drivers for one day at the New Haven Transfer Station. The New Haven Transfer Station is one of the larger transfer stations in the state of Connecticut, and delivers waste to at least three of the other facilities participating in the waste characterization study.

The total tonnage of waste reported during the survey hours at New Haven Transfer Station was 259 tons; 45% was reported as commercial (ICI) MSW, and 55% was reported as residential MSW. For lack of better data DSM decided to use this percentage of ICI and residential MSW as a representative value for all Tractor Trailers delivering waste to the other four locations.

Based on discussions with CT DEP during the Project Kickoff meeting DSM assumed that all roll-off containers from transfer stations were 100% residential waste. These roll-offs are often from smaller transfer stations that receive limited commercial waste.

Using the New Haven Transfer Station allocation for residential and ICI MSW delivered by transfer trailers for the other disposal facilities surveyed, together with the assumption that all MSW delivered in roll-off containers from other transfer stations is residential, a rough estimation of a state-wide allocation between residential and ICI MSW can be made, as illustrated in Table 4, below. Total tons delivered to the five locations during the hours the enumerator was present and surveying were 4590 tons. Sixty percent was residential waste and forty percent commercial (ICI) waste.

Table 4
ICI / Residential Tons by Truck Type (Statewide Allocation)

Truck Type Surveyed	ICI Tonnage		Residential Tonnage	
	Tons	% of Com Tons	Tons	% of Res Tons
Dump Truck	5.91	0%	27.25	1%
Box Truck	8.44	0%	0.52	0%
Rear or Side Load Compactor	12.90	1%	1294.40	47%
Open Top Roll Off 40 yd	29.88	2%	126.46	5%
Closed Roll Off Compactor 40 yd	184.11	10%	40.40	1%
Front End Loader Compactor	673.64	37%	168.25	6%
Tractor Trailer Trucks	924.10	50%	1093.66	40%
Total	1838.98	100%	2750.94	100%
Percentage of Total Tons	40%		60%	

If one were to remove Tractor Trailer trucks from the data set, residential MSW increases to 64% of the tonnage surveyed (Table 5, below).

Table 5
ICI / Residential Tons by Truck Type excluding Tractor Trailers

Truck Type Surveyed without Tractor Trailers	ICI Tonnage		Residential Tonnage	
	Tons	% of Com Tons	Tons	% of Res Tons
Dump Truck	5.91	1%	27.25	2%
Box Truck	8.44	1%	0.52	0%
Rear or Side Load Compactor	12.90	1%	1294.40	78%
Open Top Roll Off 40 yd	29.88	3%	126.46	8%
Closed Roll Off Compactor 40 yd	184.11	20%	40.40	2%
Front End Loader Compactor	673.64	74%	168.25	10%
Total	914.88	100%	1657.28	100%
% of Total Tons w/o TT	36%		64%	

Allocation by Facility

Table 6 presents the allocation of disposed MSW by surveyed facility. This allocation can be used to allocate MSW composition by facility, keeping in mind that the data are not considered statistically accurate at the facility level.

As illustrated by Table 6, the percentage of ICI MSW varied from 30 to 45% of the daily tonnage for the five locations surveyed. The Bristol Resource Recovery Facility had the lowest percentage of ICI MSW at 30%. New Haven Transfer Station had the highest percentage of ICI MSW at 45%.

**Table 6
ICI / Residential Tons by Truck Type per Facility**

Truck Type Surveyed at Bristol Resource Recovery Facility	ICI Tonnage		Residential Tonnage	
	Tons	% of Bristol Com	Tons	% of Bristol Res
Dump Truck	1.98	1%	0.00	0%
Box Truck	0.00	0%	0.00	0%
Rear or Side Load Compactor	0.00	0%	263.79	69%
Open Top Roll Off 40 yd	6.57	4%	37.36	10%
Closed Roll Off Compactor 40 yd	25.43	16%	0.00	0%
Front End Loader Compactor	46.90	29%	13.18	3%
Tractor Trailer Trucks	82.73	51%	65.32	17%
Bristol Resource Recovery Facility Total	163.61	100%	379.65	100%
% Total Tons Bristol Resource Recovery Facility	30%		70%	
Truck Type Surveyed at Wheelabrator Bridgeport	ICI Tonnage		Residential Tonnage	
	Tons	% of Com Tons	Tons	% of Res Tons
Dump Truck	0.00	0%	0.00	0%
Box Truck	0.00	0%	0.00	0%
Rear or Side Load Compactor	0.00	0%	74.52	29%
Open Top Roll Off 40 yd	0.00	0%	0.00	0%
Closed Roll Off Compactor 40 yd	21.17	11%	0.00	0%
Front End Loader Compactor	28.84	15%	2.34	1%
Tractor Trailer Trucks	148.77	75%	181.84	70%
Wheelabrator Bridgeport Total	198.78	100%	258.70	100%
% Total Tons Wheelabrator Bridgeport	43%		57%	
Truck Type Surveyed at New Haven Transfer Station	ICI Tonnage		Residential Tonnage	
	Tons	% of Com Tons	Tons	% of Res Tons
Dump Truck	2.61	2%	22.81	16%
Box Truck	4.38	4%	0.52	0%
Rear or Side Load Compactor	12.90	11%	115.48	80%
Open Top Roll Off 40 yd	6.85	6%	0.00	0%
Closed Roll Off Compactor 40 yd	23.59	20%	0.00	0%
Front End Loader Compactor	65.33	56%	4.67	3%
Tractor Trailer Trucks	0.00	0%	0.00	0%
New Haven Transfer Station Total	115.66	100%	143.48	100%
% Total Tons New Haven Transfer Station	45%		55%	
Truck Type Surveyed at CRRR Southeast Project (Preston)	ICI Tonnage		Residential Tonnage	
	Tons	% of Com Tons	Tons	% of Res Tons
Dump Truck	0.83	0%	0.00	0%
Box Truck	4.06	1%	0.00	0%
Rear or Side Load Compactor	0.00	0%	274.78	42%
Open Top Roll Off 40 yd	14.33	3%	68.74	11%
Closed Roll Off Compactor 40 yd	40.44	9%	14.62	2%
Front End Loader Compactor	181.12	42%	57.82	9%
Tractor Trailer Trucks	194.13	45%	237.28	36%
CRRR Southeast Project (Preston) Total	434.91	100%	653.24	100%
% Total Tons CRRR Southeast Project (Preston)	40%		60%	
Truck Type Surveyed at CRRR Mid-CT Project (Hartford)	ICI Tonnage		Residential Tonnage	
	Tons	% of Com Tons	Tons	% of Res Tons
Dump Truck	0.49	0%	4.44	0%
Box Truck	0.00	0%	0.00	0%
Rear or Side Load Compactor	0.00	0%	565.84	43%
Open Top Roll Off 40 yd	2.13	0%	20.36	2%
Closed Roll Off Compactor 40 yd	73.48	8%	25.78	2%
Front End Loader Compactor	351.46	38%	90.23	7%
Tractor Trailer Trucks	498.46	54%	609.23	46%
CRRR Mid-CT Project (Hartford) Total	926.02	100%	1315.88	100%
% Total Tons CRRR Mid-CT Project (Hartford)	41%		59%	

Based on surveys conducted during the first round of sampling as presented in Table 6, above, DSM recommends a state-wide allocation of 60 percent residential and 40 percent ICI.

Facility specific allocations can be made based on the four categories of waste specified in the Study Design, as presented in Table 7, or as a percent of total deliveries, as presented in Table 6. For purposes of this Interim Report, the simple Table 7 allocation, consistent with the Study Design, will be used. However, once another round of surveying has been completed, a final state-wide allocation will be used based on the hauler survey data to present total tonnage by material type.

Table 7 presents the data collected during the survey based solely on the four categories contained in the Study Design, ignoring box trucks, dump trucks, and transfer trailer trucks. Table 7 reports tonnage delivered for each category on the day of the survey at that facility exactly as it would have been selected for characterization by the Field Supervisor. That means that all rear and side loaders are categorized as Residential MSW and all front end loaders are categorized as ICI MSW.

The Wheelabrator Bridgeport facility was surveyed by DSM on March 2, 2009 during a winter storm. No Residential Transfer Trucks (40 yard open and closed roll offs with residential waste) were delivered on that day due to the storm. Therefore, tonnage data from February 27, 2009 (a day that the Field Supervisor collected samples) was requested from the Wheelabrator Bridgeport facility to better represent normal conditions. Table 7, which includes the February 27, 2009 data from Wheelabrator Bridgeport, has been used to allocate the facility specific sampling data presented in the MSW composition tables below.

**Table 7
ICI / Residential Tons by Truck Type per Facility w/o Box, Dump, TT**

Facility		Residential Tonnage		ICI Tonnage	
		Residential Transfer	Packer Loads	Compacted Dropboxes	Packer Loads
Bristol Resource Recovery Facility	Tons	37	264	32	60
CRRA Mid-CT (Hartford)	Tons	46	566	76	442
CRRA Southeastern Project (Preston)	Tons	83	275	55	239
New Haven Transfer Station	Tons	0	128	30	70
Wheelabrator Bridgeport	Tons	95	408	31	240
Totals	Tons	262	1641	223	1051

Statewide Waste Composition Findings

During the first season of the Study, 129 randomly selected waste loads from the five solid waste facilities were collected and analyzed. A detailed description of the load selection and sorting procedure follows.

Load Selection

MSW Consultants used a systematic selection procedure to identify the vehicles to be selected for manual grab sampling at the host facility. Systematic sampling is intended to remove any sampling bias that may arise from an individual selecting specific incoming vehicles. To remove such bias, the Field Supervisor divided the total number of incoming residential and ICI loads at a facility by the number of samples needed that day from that facility. The resulting number is the sampling frequency and determines whether every third vehicle, every sixth vehicle, or every 20th vehicle is selected for sampling. This strategy is the known as the “Nth Truck” approach.

The field supervisor attempted to interview each driver entering the facility to determine the type of waste collected in the vehicle. If the Field Supervisor was busy taking another sample or managing the sorting activity, some trucks may pass without being interviewed.

Deviations from the nth truck occurred if the sorting crew completed sorting all the obtained samples and was waiting for the next sample to be taken. In that case the Field Supervisor deviated from the “N” truck protocol to take the next truck and meet the sampling plan requirements for the facility. MSW Consultants does not believe this introduces any bias into the sampling, because the next eligible load is automatically taken under this circumstance and no manual judgment enters into the decision.

The systematically selected loads were directed to a designated tipping area for subsequent grab sampling. During the interview process, the Field Supervisor confirmed information such as origin of the load, waste generating sector, hauler, vehicle type and number, and other data. This information was noted on a vehicle selection form, along with a unique identifying number associated with that vehicle on that day.

Physical Sorting of MSW Samples

Once the sample had been acquired and placed in 50 gallon holding barrels, specially labeled with the unique identification number, the material was unloaded onto the sorting table and manually sorted into the prescribed component categories. Plastic 18-gallon bins with sealed bottoms, each labeled and located around the sorting table, were used to contain the separated components.

Sorters were trained to specialize in certain material groups, with someone handling the paper categories, another plastics, another glass and metals, and so on. In this way,

sorters became highly knowledgeable in a short period of time as to the definitions of individual material categories.

The Crew Chief monitored the bins as each sample was being sorted, requiring a re-sort of materials that were improperly classified. Open bins allowed the Crew Chief to see the material at all times. The Crew Chief also verified the sorting accuracy of each component during the weigh-out.

The materials were sorted to particle size of 2-inches or less by hand, until no more than a small amount of homogeneous material remained. This layer of mixed 2-inch-minus material was allocated to the appropriate categories based on the best judgment of the Crew Chief—most often a combination of Other Paper, Other Organics, or Food Waste.

The overall goal was to sort each sample directly into component categories in order to reduce the amount of indistinguishable fines or miscellaneous categories. Note that the sorting methodology included the use of a customized, sturdy framed sort table that has a removable screen sized at ½ inch. Small particles passing through the screen were swept into a separate container and recorded in their own material category called “Bottom Fines & Dirt” (categorized under the Organics material group).

Data Recording

The weigh-out and data recording process is arguably the most critical process of the sort. The Crew Chief was singularly responsible for overseeing all weighing and data recording of each manually sorted sample. Once each sample had been sorted, and fines swept from the table, the weigh-out was performed. Each bin containing sorted materials from the just-completed samples were carried over to a digital scale provided by MSW Consultants. Sorting laborers assisted with carrying and weighing the bins of sorted material, the Crew Chief recorded all data. After each bin was weighed, the bins were emptied in the prescribed discard area for final disposal.

The Crew Chief used a waste composition data sheet to record the composition weights. Each data sheet containing the sorted weights of each sample was matched up against the Field Supervisor’s sample sheet to assure accurate tracking of the samples each day.

The following section presents preliminary composition estimates for each of the five facilities and at the statewide level, for the overall MSW stream as well as the residential and ICI sectors.

Note that the percentage composition has not been converted to tonnages because another round of hauler surveys are necessary before final residential and ICI allocations are made.

The following table shows how many samples were collected by site and sector.

Season One Samples Collected, by Site and Sector

Facility	Residential		ICI		Actual Totals	Planned Totals
	Residential Transfer	Packer Loads	Compacted Dropboxes	Packer Loads		
Bristol Resource Recovery Facility	5	7	3	9	24	24
Bridgeport Wheelabrator	2	10	4	8	24	24
New Haven Transfer Station	0	12	7	5	24	24
CRRRA Southeast Project (Preston)	3	9	6	5	23	24
CRRRA Mid-CT Project (Hartford)	3	3	3	25	34	24
Actual Totals	13	41	23	52	129	120
Planned Totals	13	32	20	55	120	

Data Analysis Procedures

Following the season one fieldwork, all field forms were transported back to MSW's office and entered into a waste composition spreadsheet. The spreadsheet was then electronically sent to Cascadia Consulting Group for entry in an Access analysis database created specifically for the Connecticut Statewide Study. The Project Team's data entry procedure has been developed to protect the integrity of the data at every step of the process, from collection in the field to final analysis.

After the *sample tally sheets* were checked by the Field Supervisor, the data manager verified that all required data had been recorded properly and supervised the data entry process. As an additional step in quality control, an inspection of randomly selected records was carried out to monitor the accuracy of the data entry process.

Once these steps had been taken, Cascadia Consulting conducted the waste composition analysis as follows.

Composition estimates represent the **ratio of the components' weight to the total waste** for each noted material component in a particular segment of the waste stream. They are derived by summing each component's weight across all of the relevant samples 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 material 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 material components
-

The confidence interval for this estimate is 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:

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

where:

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

(Note: the standard deviation is the square root of the variance term.)

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

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

where:

- $t =$ the value of the t -statistic corresponding to a 90% confidence level

A weighted average of composition percents is used when the findings for small segments of the waste stream are aggregated to describe a larger piece of the waste stream. The **weighted average for an aggregated composition estimate** is performed as follows:

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

where:

- $p =$ the proportion of tonnage contributed by the noted substream (i.e., the weighting factor)
- $r =$ ratio of component weight to total waste weight in the noted substream (i.e., the composition percent for the given material component)
- for $j = 1$ to m
- where $m =$ number of material components
-

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

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

(Note: the **standard deviation** is the square root of the variance term.)

Explanation of Mean Estimates and Confidence Intervals

Data from the sorting process were treated with a statistical procedure that provided three kinds of information for each of the material categories found in the tables below:

- the **mean estimate**, which is the percent-by-weight estimated the individual material within the set (or subset) of samples that were examined.
- the **confidence interval**, which represents upper and lower boundaries around the mean estimate. Calculating the confidence interval at the 90% confidence level, as we have done in this analysis, means we are 90% certain that the true mean composition percent for a given material lies between the upper and lower boundaries around the mean estimate.
- the **standard deviation**, which is measurement of the variability of the amount of a given material from one sample to another.

Overall Statewide Waste Composition, Season One

Overall, 129 samples were characterized to calculate the statewide waste composition results for season one: 54 residential and 75 ICI. Tables for the overall Connecticut disposed MSW stream, the overall disposed residential MSW stream, and the overall disposed ICI MSW stream are shown below.

Overall Waste-Connecticut Statewide

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	30.7%			Organics	22.5%		
OCC/Kraft Paper	6.3%	0.9%	0.53%	Food Waste	14.5%	1.7%	1.03%
Offshore Cardboard	0.6%	0.2%	0.11%	Branches & Stumps	0.6%	0.5%	0.33%
High Grade Office Paper	2.1%	0.6%	0.33%	Prunings & Trimmings	1.5%	0.6%	0.37%
Magazines/Catalogs	1.6%	0.3%	0.19%	Leaves & Grass	1.4%	0.9%	0.52%
Newsprint	2.6%	1.1%	0.65%	Manures	0.1%	0.1%	0.08%
Phone Books & Directories	0.3%	0.1%	0.09%	R/C Organic	4.4%	0.8%	0.52%
Other Recyclable Paper	3.7%	0.3%	0.21%				
Compostable Paper	9.4%	1.0%	0.58%	Construction and Demolition	12.0%		
R/C Paper	4.1%	1.0%	0.62%	Asphalt, Brick, & Concrete	0.0%	0.0%	0.03%
				Wood - Treated	3.9%	1.0%	0.60%
Plastic	15.1%			Wood - Untreated	2.0%	0.8%	0.47%
PET Bottles/Jars (non-haz)	0.8%	0.1%	0.06%	Asphalt Roofing	0.0%	0.0%	0.02%
PET Containers-non bottles (non-haz)	0.1%	0.0%	0.03%	Drywall/Gypsum Board	0.2%	0.3%	0.18%
Plastic CT Dep. Bev. Containers	0.4%	0.3%	0.20%	Carpet	3.8%	3.2%	1.97%
HDPE Bottles (non-haz)	0.5%	0.1%	0.06%	Carpet Padding	0.6%	0.4%	0.22%
HDPE Containers other than Bottles	0.1%	0.1%	0.03%	R/C C&D	1.4%	0.6%	0.35%
Plastic Containers #3-#7 (non-haz)	0.6%	0.2%	0.10%				
Expanded Poly. Non-Food Grade	0.2%	0.1%	0.06%	Household Hazardous Waste (HHW)	0.8%		
Expanded Poly. Food-grade	0.6%	0.1%	0.06%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.01%
Durable Plastic Items	2.9%	1.2%	0.73%	Batteries - Lead Acid	0.0%	0.0%	0.01%
Film	0.4%	0.2%	0.12%	Other Batteries	0.1%	0.0%	0.02%
Grocery/Merchandise Bags	0.6%	0.1%	0.05%	Paint	0.1%	0.1%	0.05%
Other Film	4.4%	0.5%	0.33%	Sharps	0.0%	0.0%	0.01%
Pallets - Plastic	0.3%	0.2%	0.13%	Vehicle & Equipment Fluids	0.1%	0.0%	0.03%
R/C Plastic	3.3%	0.7%	0.44%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.3%	0.1%	0.08%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	4.1%			Other Hazardous Waste & HHW	0.3%	0.3%	0.19%
Alc. Beverage Containers	0.1%	0.1%	0.04%				
Alc. CT Dep. Bev. Containers	0.2%	0.1%	0.04%	Electronics	2.3%		
Tin/Steel Containers	0.9%	0.2%	0.11%	Computer-related Electronics	0.4%	0.3%	0.18%
Other Ferrous	0.7%	0.3%	0.16%	Other Small Consumer Electronics	0.8%	0.3%	0.20%
Other Non-Ferrous	0.6%	0.1%	0.06%	TVs and Computer Monitors	0.8%	0.7%	0.44%
Appliances	0.8%	0.6%	0.38%	Other Large Electronics	0.4%	0.5%	0.29%
Compressed Fuel Containers	0.0%	0.0%	0.01%				
R/C Metal	0.8%	0.3%	0.18%	Other Waste	9.7%		
				Bulky Items	2.0%	1.0%	0.64%
Glass	2.7%			Textiles (other than carpet)	4.5%	0.9%	0.53%
Clear & Amber Glass Containers	1.5%	1.0%	0.58%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.01%
Green & Other Colored Glass Cont.	0.3%	0.1%	0.07%	Bottom Fines & Dirt	1.6%	0.3%	0.16%
Glass CT Dep. Bev. Containers	0.3%	0.1%	0.05%	Other Miscellaneous	1.6%	0.4%	0.26%
Flat Glass - Uncoated	0.1%	0.1%	0.07%				
R/C Glass	0.6%	0.5%	0.31%	Totals	100.0%		
				Sample Count	129		

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

Overall Residential Waste-Connecticut Statewide

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	30.9%			Organics	24.6%		
OCC/Kraft Paper	3.1%	0.8%	0.51%	Food Waste	14.3%	2.4%	1.44%
Offshore Cardboard	0.6%	0.2%	0.09%	Branches & Stumps	0.8%	0.9%	0.54%
High Grade Office Paper	2.0%	0.8%	0.49%	Prunings & Trimmings	1.6%	0.8%	0.49%
Magazines/Catalogs	2.0%	0.5%	0.29%	Leaves & Grass	2.1%	1.4%	0.85%
Newsprint	3.3%	1.8%	1.07%	Manures	0.1%	0.1%	0.06%
Phone Books & Directories	0.4%	0.2%	0.11%	R/C Organic	5.9%	0.9%	0.58%
Other Recyclable Paper	4.2%	0.4%	0.26%				
Compostable Paper	11.3%	1.3%	0.80%	Construction and Demolition	9.3%		
R/C Paper	4.0%	0.6%	0.34%	Asphalt, Brick, & Concrete	0.1%	0.1%	0.05%
				Wood - Treated	2.5%	1.1%	0.68%
Plastic	14.3%			Wood - Untreated	0.4%	0.3%	0.17%
PET Bottles/Jars (non-haz)	0.9%	0.1%	0.07%	Asphalt Roofing	0.0%	0.1%	0.04%
PET Containers-non bottles (non-haz)	0.1%	0.1%	0.04%	Drywall/Gypsum Board	0.0%	0.0%	0.02%
Plastic CT Dep. Bev. Containers	0.2%	0.1%	0.06%	Carpet	4.8%	5.4%	3.26%
HDPE Bottles (non-haz)	0.6%	0.1%	0.08%	Carpet Padding	0.6%	0.5%	0.30%
HDPE Containers other than Bottles	0.1%	0.0%	0.02%	R/C C&D	0.8%	0.4%	0.27%
Plastic Containers #3-#7 (non-haz)	0.5%	0.1%	0.05%				
Expanded Poly. Non-Food Grade	0.1%	0.0%	0.03%	Household Hazardous Waste (HHW)	0.5%		
Expanded Poly. Food-grade	0.6%	0.1%	0.08%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.00%
Durable Plastic Items	2.1%	1.1%	0.69%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Film	0.2%	0.1%	0.07%	Other Batteries	0.1%	0.0%	0.02%
Grocery/Merchandise Bags	0.8%	0.1%	0.08%	Paint	0.1%	0.1%	0.09%
Other Film	4.8%	0.8%	0.48%	Sharps	0.0%	0.0%	0.01%
Pallets - Plastic	0.2%	0.2%	0.13%	Vehicle & Equipment Fluids	0.0%	0.0%	0.03%
R/C Plastic	2.7%	0.5%	0.28%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.1%	0.1%	0.04%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	4.7%			Other Hazardous Waste & HHW	0.1%	0.0%	0.02%
Alc. Beverage Containers	0.1%	0.1%	0.07%				
Alc. CT Dep. Bev. Containers	0.1%	0.1%	0.03%	Electronics	2.1%		
Tin/Steel Containers	1.2%	0.3%	0.16%	Computer-related Electronics	0.1%	0.1%	0.09%
Other Ferrous	0.6%	0.2%	0.14%	Other Small Consumer Electronics	1.0%	0.5%	0.32%
Other Non-Ferrous	0.7%	0.1%	0.09%	TVs and Computer Monitors	0.8%	1.1%	0.67%
Appliances	1.3%	1.0%	0.63%	Other Large Electronics	0.1%	0.2%	0.13%
Compressed Fuel Containers	0.0%	0.0%	0.02%				
R/C Metal	0.7%	0.4%	0.23%	Other Waste	10.4%		
				Bulky Items	1.8%	1.5%	0.89%
Glass	3.4%			Textiles (other than carpet)	5.8%	1.4%	0.82%
Clear & Amber Glass Containers	2.0%	1.6%	0.97%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.2%	0.1%	0.08%	Bottom Fines & Dirt	1.9%	0.4%	0.25%
Glass CT Dep. Bev. Containers	0.3%	0.1%	0.06%	Other Miscellaneous	0.9%	0.4%	0.22%
Flat Glass - Uncoated	0.0%	0.0%	0.01%				
R/C Glass	0.8%	0.9%	0.52%				
				Totals	100.0%		
				Sample Count	54		

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

Overall ICI Waste-Connecticut Statewide

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	30.5%			Organics	19.3%		
OCC/Kraft Paper	11.0%	1.8%	1.10%	Food Waste	14.8%	2.3%	1.40%
Offshore Cardboard	0.8%	0.4%	0.24%	Branches & Stumps	0.3%	0.3%	0.21%
High Grade Office Paper	2.3%	0.7%	0.41%	Prunings & Trimmings	1.4%	0.9%	0.55%
Magazines/Catalogs	1.0%	0.3%	0.18%	Leaves & Grass	0.4%	0.5%	0.32%
Newsprint	1.4%	0.5%	0.31%	Manures	0.2%	0.3%	0.19%
Phone Books & Directories	0.3%	0.2%	0.13%	R/C Organic	2.2%	1.6%	0.95%
Other Recyclable Paper	3.0%	0.6%	0.35%				
Compostable Paper	6.6%	1.3%	0.82%	Construction and Demolition	16.0%		
R/C Paper	4.2%	2.4%	1.45%	Asphalt, Brick, & Concrete	0.0%	0.0%	0.00%
				Wood - Treated	5.9%	1.8%	1.12%
Plastic	16.4%			Wood - Untreated	4.4%	1.9%	1.14%
PET Bottles/Jars (non-haz)	0.7%	0.2%	0.11%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.1%	0.0%	0.01%	Drywall/Gypsum Board	0.6%	0.7%	0.45%
Plastic CT Dep. Bev. Containers	0.6%	0.8%	0.48%	Carpet	2.3%	1.2%	0.72%
HDPE Bottles (non-haz)	0.4%	0.1%	0.07%	Carpet Padding	0.6%	0.5%	0.33%
HDPE Containers other than Bottles	0.2%	0.1%	0.07%	R/C C&D	2.3%	1.3%	0.77%
Plastic Containers #3-#7 (non-haz)	0.6%	0.4%	0.25%				
Expanded Poly. Non-Food Grade	0.3%	0.3%	0.15%	Household Hazardous Waste (HHW)	1.4%		
Expanded Poly. Food-grade	0.5%	0.1%	0.09%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.01%
Durable Plastic Items	3.9%	2.5%	1.51%	Batteries - Lead Acid	0.0%	0.1%	0.03%
Film	0.7%	0.4%	0.27%	Other Batteries	0.1%	0.0%	0.03%
Grocery/Merchandise Bags	0.3%	0.1%	0.05%	Paint	0.0%	0.0%	0.01%
Other Film	3.8%	0.6%	0.39%	Sharps	0.0%	0.0%	0.02%
Pallets - Plastic	0.3%	0.4%	0.27%	Vehicle & Equipment Fluids	0.1%	0.1%	0.06%
R/C Plastic	4.0%	1.7%	1.01%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.5%	0.3%	0.18%
				Pesticides & Fertilizers	0.0%	0.0%	0.01%
Metal	3.2%			Other Hazardous Waste & HHW	0.6%	0.8%	0.47%
Alc. Beverage Containers	0.0%	0.0%	0.01%				
Alc. CT Dep. Bev. Containers	0.2%	0.1%	0.09%	Electronics	2.7%		
Tin/Steel Containers	0.6%	0.2%	0.15%	Computer-related Electronics	0.8%	0.7%	0.43%
Other Ferrous	0.9%	0.6%	0.33%	Other Small Consumer Electronics	0.3%	0.2%	0.11%
Other Non-Ferrous	0.4%	0.1%	0.08%	TVs and Computer Monitors	0.8%	0.8%	0.46%
Appliances	0.0%	0.0%	0.00%	Other Large Electronics	0.9%	1.1%	0.69%
Compressed Fuel Containers	0.0%	0.0%	0.02%				
R/C Metal	1.0%	0.5%	0.28%	Other Waste	8.8%		
				Bulky Items	2.4%	1.4%	0.88%
Glass	1.6%			Textiles (other than carpet)	2.6%	0.8%	0.49%
Clear & Amber Glass Containers	0.6%	0.2%	0.15%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.02%
Green & Other Colored Glass Cont.	0.3%	0.2%	0.13%	Bottom Fines & Dirt	1.1%	0.3%	0.16%
Glass CT Dep. Bev. Containers	0.3%	0.1%	0.08%	Other Miscellaneous	2.6%	0.9%	0.55%
Flat Glass - Uncoated	0.3%	0.3%	0.17%				
R/C Glass	0.1%	0.1%	0.04%				
				Totals	100.0%		
				Sample Count	75		

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

Waste Composition, by Facility, Season One

Composition results from all five of the solid waste facilities visited during season one are found in this section.

Bristol Resource Recovery Facility

At the Bristol Resource Recovery Facility, 24 samples were collected overall: 12 residential and 12 ICI. The overall, residential, and ICI results for the Bristol Resource Recovery Facility are found in this section.

Overall Waste-Bristol Resource Recovery Facility

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	31.4%			Organics	21.7%		
OCC/Kraft Paper	5.6%	1.9%	1.17%	Food Waste	12.1%	3.7%	2.27%
Offshore Cardboard	0.8%	0.8%	0.47%	Branches & Stumps	0.0%	0.0%	0.00%
High Grade Office Paper	4.0%	2.3%	1.38%	Prunings & Trimmings	2.8%	3.0%	1.82%
Magazines/Catalogs	1.7%	0.7%	0.43%	Leaves & Grass	1.3%	1.7%	1.03%
Newsprint	1.7%	0.6%	0.35%	Manures	0.3%	0.5%	0.30%
Phone Books & Directories	0.2%	0.2%	0.12%	R/C Organic	5.2%	1.8%	1.06%
Other Recyclable Paper	2.2%	0.8%	0.46%				
Compostable Paper	9.4%	2.2%	1.37%	Construction and Demolition	11.2%		
R/C Paper	5.8%	2.3%	1.39%	Asphalt, Brick, & Concrete	0.1%	0.1%	0.07%
				Wood - Treated	5.8%	3.1%	1.87%
Plastic	14.9%			Wood - Untreated	0.6%	0.5%	0.32%
PET Bottles/Jars (non-haz)	0.9%	0.3%	0.20%	Asphalt Roofing	0.0%	0.0%	0.02%
PET Containers-non bottles (non-haz)	0.1%	0.1%	0.06%	Drywall/Gypsum Board	0.1%	0.1%	0.04%
Plastic CT Dep. Bev. Containers	0.2%	0.0%	0.02%	Carpet	2.4%	3.0%	1.83%
HDPE Bottles (non-haz)	0.6%	0.2%	0.11%	Carpet Padding	0.6%	1.0%	0.60%
HDPE Containers other than Bottles	0.2%	0.2%	0.10%	R/C C&D	1.7%	1.2%	0.74%
Plastic Containers #3-#7 (non-haz)	0.5%	0.2%	0.14%				
Expanded Poly. Non-Food Grade	0.2%	0.1%	0.06%	Household Hazardous Waste (HHW)	1.0%		
Expanded Poly. Food-grade	0.6%	0.2%	0.10%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.00%
Durable Plastic Items	1.8%	1.7%	1.03%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Film	0.9%	1.2%	0.75%	Other Batteries	0.2%	0.2%	0.10%
Grocery/Merchandise Bags	0.7%	0.2%	0.14%	Paint	0.5%	0.7%	0.44%
Other Film	4.4%	0.6%	0.34%	Sharps	0.0%	0.0%	0.01%
Pallets - Plastic	0.3%	0.3%	0.20%	Vehicle & Equipment Fluids	0.1%	0.1%	0.06%
R/C Plastic	3.4%	1.0%	0.61%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.1%	0.2%	0.11%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	4.9%			Other Hazardous Waste & HHW	0.1%	0.1%	0.05%
Alc. Beverage Containers	0.0%	0.0%	0.00%				
Alc. CT Dep. Bev. Containers	0.2%	0.1%	0.09%	Electronics	1.3%		
Tin/Steel Containers	1.8%	0.9%	0.57%	Computer-related Electronics	0.0%	0.0%	0.00%
Other Ferrous	0.6%	0.4%	0.22%	Other Small Consumer Electronics	0.8%	0.8%	0.48%
Other Non-Ferrous	0.3%	0.1%	0.08%	TVs and Computer Monitors	0.2%	0.3%	0.17%
Appliances	0.7%	1.1%	0.65%	Other Large Electronics	0.2%	0.3%	0.15%
Compressed Fuel Containers	0.1%	0.2%	0.10%				
R/C Metal	1.2%	1.6%	0.97%	Other Waste	9.6%		
				Bulky Items	1.0%	1.2%	0.72%
Glass	3.9%			Textiles (other than carpet)	5.5%	1.4%	0.88%
Clear & Amber Glass Containers	1.0%	0.3%	0.16%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.1%	0.1%	0.09%	Bottom Fines & Dirt	1.5%	0.4%	0.25%
Glass CT Dep. Bev. Containers	0.1%	0.1%	0.06%	Other Miscellaneous	1.6%	0.8%	0.48%
Flat Glass - Uncoated	0.0%	0.0%	0.00%				
R/C Glass	2.7%	4.1%	2.50%	Totals	100.0%		
				Sample Count	24		

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

Residential Waste-Bristol Resource Recovery Facility

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	31.7%			Organics	22.9%		
OCC/Kraft Paper	2.3%	0.8%	0.48%	Food Waste	13.9%	4.7%	2.86%
Offshore Cardboard	0.1%	0.1%	0.04%	Branches & Stumps	0.0%	0.0%	0.00%
High Grade Office Paper	4.4%	2.9%	1.76%	Prunings & Trimmings	1.6%	2.4%	1.48%
Magazines/Catalogs	1.9%	0.9%	0.54%	Leaves & Grass	0.4%	0.4%	0.26%
Newsprint	2.0%	0.7%	0.45%	Manures	0.4%	0.6%	0.39%
Phone Books & Directories	0.3%	0.3%	0.15%	R/C Organic	6.6%	2.3%	1.39%
Other Recyclable Paper	2.7%	1.0%	0.60%				
Compostable Paper	11.0%	2.9%	1.75%	Construction and Demolition	8.5%		
R/C Paper	7.0%	3.0%	1.80%	Asphalt, Brick, & Concrete	0.1%	0.2%	0.10%
				Wood - Treated	2.5%	1.8%	1.11%
Plastic	15.1%			Wood - Untreated	0.5%	0.6%	0.34%
PET Bottles/Jars (non-haz)	1.1%	0.4%	0.26%	Asphalt Roofing	0.0%	0.0%	0.03%
PET Containers-non bottles (non-haz)	0.2%	0.1%	0.08%	Drywall/Gypsum Board	0.0%	0.0%	0.00%
Plastic CT Dep. Bev. Containers	0.2%	0.0%	0.03%	Carpet	3.1%	3.9%	2.39%
HDPE Bottles (non-haz)	0.7%	0.2%	0.15%	Carpet Padding	0.8%	1.3%	0.78%
HDPE Containers other than Bottles	0.1%	0.0%	0.03%	R/C C&D	1.6%	1.5%	0.91%
Plastic Containers #3-#7 (non-haz)	0.6%	0.3%	0.19%				
Expanded Poly. Non-Food Grade	0.2%	0.1%	0.05%	Household Hazardous Waste (HHW)	1.1%		
Expanded Poly. Food-grade	0.7%	0.2%	0.12%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.00%
Durable Plastic Items	2.0%	2.2%	1.33%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Film	0.0%	0.1%	0.03%	Other Batteries	0.1%	0.1%	0.07%
Grocery/Merchandise Bags	0.9%	0.3%	0.18%	Paint	0.6%	0.9%	0.57%
Other Film	5.2%	0.7%	0.43%	Sharps	0.0%	0.0%	0.02%
Pallets - Plastic	0.1%	0.2%	0.15%	Vehicle & Equipment Fluids	0.1%	0.1%	0.08%
R/C Plastic	3.2%	1.0%	0.61%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.1%	0.2%	0.15%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	5.4%			Other Hazardous Waste & HHW	0.1%	0.1%	0.05%
Alc. Beverage Containers	0.0%	0.0%	0.00%				
Alc. CT Dep. Bev. Containers	0.2%	0.1%	0.05%	Electronics	1.2%		
Tin/Steel Containers	2.1%	1.2%	0.74%	Computer-related Electronics	0.0%	0.0%	0.00%
Other Ferrous	0.4%	0.2%	0.15%	Other Small Consumer Electronics	1.0%	1.0%	0.62%
Other Non-Ferrous	0.3%	0.2%	0.09%	TVs and Computer Monitors	0.2%	0.3%	0.16%
Appliances	0.9%	1.4%	0.85%	Other Large Electronics	0.0%	0.0%	0.00%
Compressed Fuel Containers	0.1%	0.2%	0.10%				
R/C Metal	1.5%	2.1%	1.27%	Other Waste	9.2%		
				Bulky Items	0.1%	0.1%	0.08%
Glass	5.0%			Textiles (other than carpet)	6.6%	1.8%	1.11%
Clear & Amber Glass Containers	1.2%	0.3%	0.21%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.1%	0.2%	0.11%	Bottom Fines & Dirt	1.8%	0.5%	0.32%
Glass CT Dep. Bev. Containers	0.1%	0.1%	0.08%	Other Miscellaneous	0.7%	0.6%	0.38%
Flat Glass - Uncoated	0.0%	0.0%	0.00%				
R/C Glass	3.5%	5.4%	3.26%	Totals	100.0%		
				Sample Count	12		

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

ICI Waste-Bristol Resource Recovery Facility

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	30.5%			Organics	17.7%		
OCC/Kraft Paper	16.6%	7.8%	4.73%	Food Waste	6.1%	4.1%	2.52%
Offshore Cardboard	3.0%	3.3%	2.02%	Branches & Stumps	0.0%	0.0%	0.00%
High Grade Office Paper	2.6%	2.1%	1.28%	Prunings & Trimmings	6.7%	10.0%	6.09%
Magazines/Catalogs	1.0%	0.8%	0.49%	Leaves & Grass	4.4%	7.1%	4.30%
Newsprint	0.7%	0.3%	0.16%	Manures	0.0%	0.0%	0.00%
Phone Books & Directories	0.1%	0.1%	0.06%	R/C Organic	0.6%	0.5%	0.31%
Other Recyclable Paper	0.6%	0.3%	0.17%				
Compostable Paper	3.9%	2.0%	1.19%	Construction and Demolition	20.3%		
R/C Paper	2.1%	1.0%	0.61%	Asphalt, Brick, & Concrete	0.0%	0.0%	0.00%
				Wood - Treated	17.0%	11.7%	7.10%
Plastic	14.4%			Wood - Untreated	0.8%	1.3%	0.77%
PET Bottles/Jars (non-haz)	0.3%	0.1%	0.07%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.0%	0.0%	0.02%	Drywall/Gypsum Board	0.2%	0.3%	0.19%
Plastic CT Dep. Bev. Containers	0.1%	0.1%	0.04%	Carpet	0.1%	0.1%	0.05%
HDPE Bottles (non-haz)	0.3%	0.1%	0.07%	Carpet Padding	0.0%	0.0%	0.00%
HDPE Containers other than Bottles	0.7%	0.7%	0.41%	R/C C&D	2.3%	1.6%	1.00%
Plastic Containers #3-#7 (non-haz)	0.2%	0.1%	0.07%				
Expanded Poly. Non-Food Grade	0.2%	0.3%	0.18%	Household Hazardous Waste (HHW)	0.6%		
Expanded Poly. Food-grade	0.2%	0.1%	0.06%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.01%
Durable Plastic Items	1.3%	1.2%	0.70%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Film	3.9%	5.3%	3.20%	Other Batteries	0.4%	0.6%	0.34%
Grocery/Merchandise Bags	0.3%	0.2%	0.11%	Paint	0.0%	0.0%	0.00%
Other Film	1.9%	0.6%	0.34%	Sharps	0.0%	0.0%	0.00%
Pallets - Plastic	0.8%	1.1%	0.69%	Vehicle & Equipment Fluids	0.0%	0.0%	0.00%
R/C Plastic	4.1%	2.8%	1.70%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.0%	0.0%	0.00%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	3.2%			Other Hazardous Waste & HHW	0.2%	0.2%	0.13%
Alc. Beverage Containers	0.0%	0.0%	0.00%				
Alc. CT Dep. Bev. Containers	0.4%	0.5%	0.33%	Electronics	1.6%		
Tin/Steel Containers	0.7%	0.8%	0.46%	Computer-related Electronics	0.0%	0.0%	0.00%
Other Ferrous	1.3%	1.4%	0.82%	Other Small Consumer Electronics	0.1%	0.1%	0.05%
Other Non-Ferrous	0.3%	0.2%	0.14%	TVs and Computer Monitors	0.5%	0.9%	0.52%
Appliances	0.0%	0.0%	0.00%	Other Large Electronics	1.0%	1.1%	0.66%
Compressed Fuel Containers	0.3%	0.4%	0.26%				
R/C Metal	0.2%	0.3%	0.15%	Other Waste	11.2%		
				Bulky Items	4.1%	5.1%	3.07%
Glass	0.5%			Textiles (other than carpet)	2.0%	1.6%	0.97%
Clear & Amber Glass Containers	0.2%	0.1%	0.07%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.0%	0.1%	0.05%	Bottom Fines & Dirt	0.4%	0.2%	0.09%
Glass CT Dep. Bev. Containers	0.1%	0.1%	0.04%	Other Miscellaneous	4.7%	2.7%	1.65%
Flat Glass - Uncoated	0.0%	0.0%	0.00%				
R/C Glass	0.1%	0.1%	0.09%	Totals	100.0%		
				Sample Count	12		

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

Wheelabrator Bridgeport

At the Wheelabrator Bridgeport facility, 24 samples were collected and sampled: 12 residential and 12 ICI. The overall, residential, and ICI results for Wheelabrator Bridgeport are found in this section.

Overall Waste-Wheelabrator Bridgeport Resource Recovery Facility

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	30.7%			Organics	24.5%		
OCC/Kraft Paper	8.6%	2.5%	1.53%	Food Waste	13.1%	3.4%	2.09%
Offshore Cardboard	0.5%	0.2%	0.12%	Branches & Stumps	1.9%	2.2%	1.33%
High Grade Office Paper	1.7%	0.8%	0.49%	Prunings & Trimmings	1.4%	1.4%	0.83%
Magazines/Catalogs	2.1%	0.9%	0.53%	Leaves & Grass	1.9%	1.7%	1.04%
Newsprint	1.6%	0.4%	0.24%	Manures	0.0%	0.0%	0.00%
Phone Books & Directories	0.2%	0.3%	0.15%	R/C Organic	6.1%	2.9%	1.75%
Other Recyclable Paper	4.0%	0.7%	0.42%				
Compostable Paper	8.1%	1.2%	0.74%	Construction and Demolition	8.3%		
R/C Paper	3.8%	0.8%	0.49%	Asphalt, Brick, & Concrete	0.1%	0.2%	0.10%
				Wood - Treated	1.7%	0.8%	0.52%
Plastic	14.6%			Wood - Untreated	2.6%	2.5%	1.54%
PET Bottles/Jars (non-haz)	1.0%	0.2%	0.15%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.1%	0.1%	0.04%	Drywall/Gypsum Board	0.0%	0.0%	0.00%
Plastic CT Dep. Bev. Containers	1.1%	1.3%	0.80%	Carpet	1.6%	1.4%	0.85%
HDPE Bottles (non-haz)	0.5%	0.2%	0.10%	Carpet Padding	0.9%	0.9%	0.54%
HDPE Containers other than Bottles	0.0%	0.0%	0.02%	R/C C&D	1.4%	1.1%	0.70%
Plastic Containers #3-#7 (non-haz)	0.4%	0.1%	0.07%				
Expanded Poly. Non-Food Grade	0.1%	0.0%	0.02%	Household Hazardous Waste (HHW)	0.6%		
Expanded Poly. Food-grade	0.7%	0.2%	0.15%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.01%
Durable Plastic Items	2.7%	1.5%	0.92%	Batteries - Lead Acid	0.0%	0.0%	0.01%
Film	0.1%	0.1%	0.07%	Other Batteries	0.1%	0.1%	0.04%
Grocery/Merchandise Bags	0.8%	0.2%	0.13%	Paint	0.0%	0.0%	0.02%
Other Film	4.0%	0.7%	0.42%	Sharps	0.1%	0.1%	0.04%
Pallets - Plastic	0.3%	0.5%	0.29%	Vehicle & Equipment Fluids	0.0%	0.1%	0.04%
R/C Plastic	2.8%	0.8%	0.46%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.2%	0.3%	0.16%
				Pesticides & Fertilizers	0.0%	0.0%	0.01%
Metal	5.3%			Other Hazardous Waste & HHW	0.1%	0.0%	0.03%
Alc. Beverage Containers	0.2%	0.3%	0.16%				
Alc. CT Dep. Bev. Containers	0.2%	0.1%	0.07%	Electronics	3.3%		
Tin/Steel Containers	0.8%	0.2%	0.13%	Computer-related Electronics	0.5%	0.8%	0.49%
Other Ferrous	1.2%	0.8%	0.48%	Other Small Consumer Electronics	1.5%	1.1%	0.69%
Other Non-Ferrous	0.9%	0.3%	0.20%	TVs and Computer Monitors	0.2%	0.3%	0.17%
Appliances	0.8%	1.1%	0.64%	Other Large Electronics	1.1%	1.9%	1.13%
Compressed Fuel Containers	0.0%	0.0%	0.00%				
R/C Metal	1.2%	0.7%	0.41%	Other Waste	8.8%		
				Bulky Items	1.4%	0.7%	0.41%
Glass	4.0%			Textiles (other than carpet)	4.7%	1.3%	0.77%
Clear & Amber Glass Containers	3.1%	3.8%	2.29%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.03%
Green & Other Colored Glass Cont.	0.4%	0.3%	0.15%	Bottom Fines & Dirt	1.4%	0.3%	0.17%
Glass CT Dep. Bev. Containers	0.4%	0.2%	0.10%	Other Miscellaneous	1.2%	0.7%	0.42%
Flat Glass - Uncoated	0.0%	0.0%	0.00%				
R/C Glass	0.1%	0.1%	0.06%				
				Totals	100.0%		
				Sample Count	24		

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

Residential Waste-Wheelabrator Bridgeport Resource Recovery Facility

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	30.9%			Organics	26.7%		
OCC/Kraft Paper	5.9%	2.5%	1.49%	Food Waste	12.4%	4.3%	2.59%
Offshore Cardboard	0.6%	0.2%	0.15%	Branches & Stumps	2.9%	3.4%	2.04%
High Grade Office Paper	1.6%	0.9%	0.55%	Prunings & Trimmings	2.1%	2.1%	1.28%
Magazines/Catalogs	3.0%	1.3%	0.81%	Leaves & Grass	2.9%	2.6%	1.60%
Newsprint	2.1%	0.5%	0.29%	Manures	0.0%	0.0%	0.00%
Phone Books & Directories	0.3%	0.4%	0.23%	R/C Organic	6.4%	2.3%	1.40%
Other Recyclable Paper	4.6%	0.7%	0.41%				
Compostable Paper	8.9%	1.4%	0.88%	Construction and Demolition	4.3%		
R/C Paper	3.8%	0.9%	0.54%	Asphalt, Brick, & Concrete	0.2%	0.3%	0.16%
				Wood - Treated	1.6%	1.1%	0.66%
Plastic	14.2%			Wood - Untreated	0.1%	0.1%	0.05%
PET Bottles/Jars (non-haz)	1.2%	0.3%	0.20%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.1%	0.1%	0.06%	Drywall/Gypsum Board	0.0%	0.0%	0.00%
Plastic CT Dep. Bev. Containers	0.3%	0.2%	0.09%	Carpet	0.7%	1.0%	0.61%
HDPE Bottles (non-haz)	0.7%	0.2%	0.14%	Carpet Padding	1.0%	1.2%	0.74%
HDPE Containers other than Bottles	0.0%	0.0%	0.01%	R/C C&D	0.8%	1.0%	0.59%
Plastic Containers #3-#7 (non-haz)	0.5%	0.2%	0.09%				
Expanded Poly. Non-Food Grade	0.1%	0.1%	0.03%	Household Hazardous Waste (HHW)	0.5%		
Expanded Poly. Food-grade	0.8%	0.3%	0.16%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.02%
Durable Plastic Items	1.9%	1.5%	0.89%	Batteries - Lead Acid	0.0%	0.0%	0.02%
Film	0.1%	0.1%	0.07%	Other Batteries	0.1%	0.1%	0.05%
Grocery/Merchandise Bags	1.0%	0.3%	0.19%	Paint	0.0%	0.0%	0.02%
Other Film	3.8%	0.7%	0.45%	Sharps	0.0%	0.0%	0.02%
Pallets - Plastic	0.5%	0.7%	0.44%	Vehicle & Equipment Fluids	0.1%	0.1%	0.07%
R/C Plastic	3.3%	1.1%	0.66%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.1%	0.1%	0.08%
				Pesticides & Fertilizers	0.0%	0.0%	0.02%
Metal	5.4%			Other Hazardous Waste & HHW	0.1%	0.1%	0.03%
Alc. Beverage Containers	0.4%	0.4%	0.25%				
Alc. CT Dep. Bev. Containers	0.2%	0.2%	0.10%	Electronics	2.3%		
Tin/Steel Containers	1.0%	0.3%	0.18%	Computer-related Electronics	0.0%	0.0%	0.02%
Other Ferrous	1.1%	0.5%	0.31%	Other Small Consumer Electronics	2.0%	1.7%	1.04%
Other Non-Ferrous	1.0%	0.4%	0.27%	TVs and Computer Monitors	0.2%	0.4%	0.24%
Appliances	1.2%	1.6%	0.99%	Other Large Electronics	0.0%	0.0%	0.00%
Compressed Fuel Containers	0.0%	0.0%	0.00%				
R/C Metal	0.5%	0.4%	0.26%	Other Waste	10.0%		
				Bulky Items	1.5%	0.7%	0.43%
Glass	5.8%			Textiles (other than carpet)	6.0%	1.6%	0.97%
Clear & Amber Glass Containers	4.7%	5.8%	3.52%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.5%	0.4%	0.22%	Bottom Fines & Dirt	1.6%	0.4%	0.22%
Glass CT Dep. Bev. Containers	0.5%	0.2%	0.15%	Other Miscellaneous	0.9%	0.7%	0.41%
Flat Glass - Uncoated	0.0%	0.0%	0.01%				
R/C Glass	0.2%	0.1%	0.09%				
				Totals	100.0%		
				Sample Count	12		

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

ICI Waste-Wheelabrator Bridgeport Resource Recovery Facility

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	30.3%			Organics	20.4%		
OCC/Kraft Paper	13.5%	5.5%	3.37%	Food Waste	14.5%	5.8%	3.55%
Offshore Cardboard	0.5%	0.4%	0.22%	Branches & Stumps	0.2%	0.3%	0.17%
High Grade Office Paper	1.9%	1.6%	0.96%	Prunings & Trimmings	0.1%	0.1%	0.05%
Magazines/Catalogs	0.4%	0.2%	0.13%	Leaves & Grass	0.0%	0.0%	0.01%
Newsprint	0.8%	0.7%	0.43%	Manures	0.0%	0.0%	0.00%
Phone Books & Directories	0.0%	0.0%	0.00%	R/C Organic	5.7%	7.0%	4.28%
Other Recyclable Paper	2.8%	1.5%	0.91%				
Compostable Paper	6.7%	2.2%	1.35%	Construction and Demolition	15.6%		
R/C Paper	3.7%	1.6%	0.99%	Asphalt, Brick, & Concrete	0.0%	0.0%	0.00%
				Wood - Treated	2.0%	1.3%	0.81%
Plastic	15.4%			Wood - Untreated	7.1%	7.2%	4.40%
PET Bottles/Jars (non-haz)	0.7%	0.3%	0.21%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.0%	0.0%	0.02%	Drywall/Gypsum Board	0.0%	0.0%	0.00%
Plastic CT Dep. Bev. Containers	2.5%	3.7%	2.27%	Carpet	3.4%	3.5%	2.16%
HDPE Bottles (non-haz)	0.2%	0.2%	0.09%	Carpet Padding	0.7%	1.2%	0.71%
HDPE Containers other than Bottles	0.1%	0.1%	0.05%	R/C C&D	2.4%	2.8%	1.67%
Plastic Containers #3-#7 (non-haz)	0.3%	0.1%	0.09%				
Expanded Poly. Non-Food Grade	0.0%	0.0%	0.01%	Household Hazardous Waste (HHW)	0.8%		
Expanded Poly. Food-grade	0.5%	0.5%	0.29%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.00%
Durable Plastic Items	4.3%	3.4%	2.05%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Film	0.2%	0.3%	0.15%	Other Batteries	0.0%	0.0%	0.02%
Grocery/Merchandise Bags	0.4%	0.2%	0.12%	Paint	0.1%	0.1%	0.05%
Other Film	4.4%	1.4%	0.87%	Sharps	0.1%	0.2%	0.12%
Pallets - Plastic	0.0%	0.0%	0.00%	Vehicle & Equipment Fluids	0.0%	0.0%	0.00%
R/C Plastic	1.8%	0.7%	0.44%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.5%	0.7%	0.45%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	4.9%			Other Hazardous Waste & HHW	0.1%	0.1%	0.06%
Alc. Beverage Containers	0.0%	0.0%	0.01%				
Alc. CT Dep. Bev. Containers	0.1%	0.0%	0.03%	Electronics	5.3%		
Tin/Steel Containers	0.4%	0.3%	0.18%	Computer-related Electronics	1.4%	2.3%	1.40%
Other Ferrous	1.5%	2.0%	1.23%	Other Small Consumer Electronics	0.4%	0.6%	0.36%
Other Non-Ferrous	0.6%	0.4%	0.26%	TVs and Computer Monitors	0.2%	0.4%	0.22%
Appliances	0.0%	0.0%	0.00%	Other Large Electronics	3.3%	5.3%	3.22%
Compressed Fuel Containers	0.0%	0.0%	0.00%				
R/C Metal	2.4%	1.8%	1.07%	Other Waste	6.6%		
				Bulky Items	1.4%	1.4%	0.85%
Glass	0.7%			Textiles (other than carpet)	2.3%	2.1%	1.27%
Clear & Amber Glass Containers	0.3%	0.2%	0.14%	Restaurant Fats, Oils, & Grease	0.1%	0.1%	0.08%
Green & Other Colored Glass Cont.	0.3%	0.3%	0.15%	Bottom Fines & Dirt	1.2%	0.4%	0.27%
Glass CT Dep. Bev. Containers	0.1%	0.1%	0.04%	Other Miscellaneous	1.7%	1.5%	0.91%
Flat Glass - Uncoated	0.0%	0.0%	0.00%				
R/C Glass	0.0%	0.0%	0.03%				
				Totals	100.0%		
				Sample Count	12		

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

New Haven Transfer Station

At the New Haven Transfer Station, 24 samples were collected and sampled: 12 residential and 12 ICI. The overall, residential, and ICI results for New Haven are found in this section.

Overall Waste-New Haven Transfer Station

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	29.4%			Organics	24.1%		
OCC/Kraft Paper	9.4%	2.8%	1.69%	Food Waste	14.7%	2.8%	1.68%
Offshore Cardboard	0.4%	0.1%	0.08%	Branches & Stumps	1.0%	1.6%	1.00%
High Grade Office Paper	1.3%	1.2%	0.75%	Prunings & Trimmings	1.4%	1.4%	0.88%
Magazines/Catalogs	1.2%	0.6%	0.39%	Leaves & Grass	1.0%	0.6%	0.39%
Newsprint	2.5%	0.9%	0.53%	Manures	1.1%	1.7%	1.05%
Phone Books & Directories	0.8%	0.6%	0.34%	R/C Organic	5.0%	1.6%	0.96%
Other Recyclable Paper	4.1%	1.1%	0.65%				
Compostable Paper	7.4%	1.6%	1.00%	Construction and Demolition	11.1%		
R/C Paper	2.4%	0.5%	0.33%	Asphalt, Brick, & Concrete	0.1%	0.2%	0.09%
				Wood - Treated	2.7%	1.9%	1.18%
Plastic	14.5%			Wood - Untreated	2.7%	2.2%	1.33%
PET Bottles/Jars (non-haz)	1.2%	0.3%	0.17%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.2%	0.1%	0.06%	Drywall/Gypsum Board	0.1%	0.1%	0.08%
Plastic CT Dep. Bev. Containers	0.3%	0.1%	0.06%	Carpet	2.8%	3.1%	1.89%
HDPE Bottles (non-haz)	0.7%	0.2%	0.09%	Carpet Padding	0.7%	1.2%	0.74%
HDPE Containers other than Bottles	0.2%	0.2%	0.10%	R/C C&D	1.9%	1.6%	0.95%
Plastic Containers #3-#7 (non-haz)	0.3%	0.1%	0.04%				
Expanded Poly. Non-Food Grade	0.1%	0.1%	0.05%	Household Hazardous Waste (HHW)	0.4%		
Expanded Poly. Food-grade	0.7%	0.3%	0.17%	Ballasts, CFLs, & Other FLs	0.1%	0.1%	0.05%
Durable Plastic Items	1.0%	0.6%	0.36%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Film	1.6%	1.3%	0.80%	Other Batteries	0.1%	0.0%	0.02%
Grocery/Merchandise Bags	0.9%	0.2%	0.10%	Paint	0.0%	0.0%	0.00%
Other Film	3.7%	0.7%	0.42%	Sharps	0.0%	0.0%	0.00%
Pallets - Plastic	0.4%	0.7%	0.42%	Vehicle & Equipment Fluids	0.1%	0.1%	0.07%
R/C Plastic	3.2%	1.5%	0.89%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.1%	0.1%	0.06%
				Pesticides & Fertilizers	0.0%	0.1%	0.03%
Metal	4.2%			Other Hazardous Waste & HHW	0.1%	0.1%	0.06%
Alc. Beverage Containers	0.1%	0.0%	0.02%				
Alc. CT Dep. Bev. Containers	0.2%	0.1%	0.07%	Electronics	1.8%		
Tin/Steel Containers	2.0%	1.2%	0.75%	Computer-related Electronics	0.7%	1.0%	0.59%
Other Ferrous	0.3%	0.2%	0.11%	Other Small Consumer Electronics	0.7%	0.5%	0.32%
Other Non-Ferrous	0.6%	0.3%	0.18%	TVs and Computer Monitors	0.4%	0.6%	0.37%
Appliances	0.0%	0.0%	0.00%	Other Large Electronics	0.0%	0.0%	0.00%
Compressed Fuel Containers	0.0%	0.0%	0.00%				
R/C Metal	1.0%	0.8%	0.50%	Other Waste	11.8%		
				Bulky Items	0.7%	1.1%	0.68%
Glass	2.6%			Textiles (other than carpet)	6.9%	2.1%	1.29%
Clear & Amber Glass Containers	1.3%	0.3%	0.18%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.1%	0.1%	0.08%	Bottom Fines & Dirt	2.1%	0.4%	0.24%
Glass CT Dep. Bev. Containers	0.6%	0.3%	0.20%	Other Miscellaneous	2.2%	3.0%	1.84%
Flat Glass - Uncoated	0.2%	0.4%	0.23%				
R/C Glass	0.4%	0.3%	0.17%				
				Totals	100.0%		
				Sample Count	24		

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

Residential Waste-New Haven Transfer Station

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	27.1%			Organics	26.6%		
OCC/Kraft Paper	2.7%	0.8%	0.46%	Food Waste	17.5%	3.1%	1.86%
Offshore Cardboard	0.5%	0.2%	0.13%	Branches & Stumps	0.0%	0.0%	0.00%
High Grade Office Paper	0.3%	0.2%	0.11%	Prunings & Trimmings	0.9%	0.8%	0.51%
Magazines/Catalogs	1.1%	0.7%	0.43%	Leaves & Grass	1.8%	1.1%	0.70%
Newsprint	2.5%	0.7%	0.42%	Manures	0.0%	0.0%	0.00%
Phone Books & Directories	1.4%	1.0%	0.61%	R/C Organic	6.4%	2.0%	1.21%
Other Recyclable Paper	5.6%	1.7%	1.03%				
Compostable Paper	9.9%	2.4%	1.48%	Construction and Demolition	6.9%		
R/C Paper	3.0%	0.6%	0.39%	Asphalt, Brick, & Concrete	0.2%	0.3%	0.17%
				Wood - Treated	2.2%	1.2%	0.70%
Plastic	15.3%			Wood - Untreated	1.5%	1.7%	1.06%
PET Bottles/Jars (non-haz)	1.5%	0.3%	0.16%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.2%	0.1%	0.05%	Drywall/Gypsum Board	0.2%	0.2%	0.14%
Plastic CT Dep. Bev. Containers	0.4%	0.1%	0.07%	Carpet	1.3%	1.3%	0.80%
HDPE Bottles (non-haz)	0.9%	0.2%	0.14%	Carpet Padding	0.0%	0.0%	0.00%
HDPE Containers other than Bottles	0.1%	0.2%	0.11%	R/C C&D	1.5%	1.8%	1.09%
Plastic Containers #3-#7 (non-haz)	0.2%	0.1%	0.05%				
Expanded Poly. Non-Food Grade	0.2%	0.1%	0.09%	Household Hazardous Waste (HHW)	0.4%		
Expanded Poly. Food-grade	0.8%	0.2%	0.09%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.00%
Durable Plastic Items	1.2%	0.8%	0.46%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Film	0.9%	1.0%	0.58%	Other Batteries	0.1%	0.0%	0.02%
Grocery/Merchandise Bags	1.4%	0.3%	0.16%	Paint	0.0%	0.0%	0.00%
Other Film	4.3%	0.6%	0.35%	Sharps	0.0%	0.0%	0.00%
Pallets - Plastic	0.8%	1.2%	0.75%	Vehicle & Equipment Fluids	0.0%	0.0%	0.01%
R/C Plastic	2.2%	0.6%	0.36%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.2%	0.2%	0.11%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	3.9%			Other Hazardous Waste & HHW	0.1%	0.1%	0.06%
Alc. Beverage Containers	0.1%	0.1%	0.03%				
Alc. CT Dep. Bev. Containers	0.4%	0.2%	0.12%	Electronics	2.1%		
Tin/Steel Containers	1.6%	0.2%	0.14%	Computer-related Electronics	0.2%	0.2%	0.10%
Other Ferrous	0.4%	0.3%	0.18%	Other Small Consumer Electronics	1.3%	0.9%	0.56%
Other Non-Ferrous	0.6%	0.2%	0.14%	TVs and Computer Monitors	0.7%	1.1%	0.65%
Appliances	0.0%	0.0%	0.00%	Other Large Electronics	0.0%	0.0%	0.00%
Compressed Fuel Containers	0.0%	0.0%	0.00%				
R/C Metal	0.8%	0.5%	0.30%	Other Waste	15.1%		
				Bulky Items	0.0%	0.0%	0.00%
Glass	2.7%			Textiles (other than carpet)	11.7%	3.8%	2.29%
Clear & Amber Glass Containers	1.5%	0.4%	0.27%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.1%	0.1%	0.06%	Bottom Fines & Dirt	3.0%	0.6%	0.34%
Glass CT Dep. Bev. Containers	0.6%	0.5%	0.28%	Other Miscellaneous	0.4%	0.2%	0.14%
Flat Glass - Uncoated	0.0%	0.0%	0.00%				
R/C Glass	0.5%	0.5%	0.29%				
				Totals	100.0%		
				Sample Count	12		

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

ICI Waste-New Haven Transfer Station

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	32.4%			Organics	20.9%		
OCC/Kraft Paper	17.9%	6.3%	3.80%	Food Waste	11.0%	4.9%	3.01%
Offshore Cardboard	0.2%	0.2%	0.10%	Branches & Stumps	2.2%	3.7%	2.28%
High Grade Office Paper	2.5%	2.8%	1.70%	Prunings & Trimmings	2.1%	3.1%	1.90%
Magazines/Catalogs	1.3%	1.2%	0.71%	Leaves & Grass	0.0%	0.0%	0.00%
Newsprint	2.5%	1.8%	1.08%	Manures	2.4%	3.9%	2.39%
Phone Books & Directories	0.0%	0.0%	0.00%	R/C Organic	3.1%	2.6%	1.55%
Other Recyclable Paper	2.2%	1.1%	0.68%	Construction and Demolition	16.6%		
Compostable Paper	4.2%	2.1%	1.26%	Asphalt, Brick, & Concrete	0.0%	0.0%	0.00%
R/C Paper	1.5%	0.9%	0.57%	Wood - Treated	3.4%	4.2%	2.53%
Plastic	13.5%			Wood - Untreated	4.3%	4.5%	2.72%
PET Bottles/Jars (non-haz)	0.8%	0.5%	0.32%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.3%	0.2%	0.12%	Drywall/Gypsum Board	0.0%	0.0%	0.03%
Plastic CT Dep. Bev. Containers	0.2%	0.2%	0.09%	Carpet	4.8%	6.9%	4.18%
HDPE Bottles (non-haz)	0.5%	0.2%	0.12%	Carpet Padding	1.7%	2.8%	1.69%
HDPE Containers other than Bottles	0.2%	0.3%	0.18%	R/C C&D	2.4%	2.7%	1.65%
Plastic Containers #3-#7 (non-haz)	0.3%	0.1%	0.08%	Household Hazardous Waste (HHW)	0.5%		
Expanded Poly. Non-Food Grade	0.0%	0.0%	0.01%	Ballasts, CFLs, & Other FLs	0.1%	0.2%	0.12%
Expanded Poly. Food-grade	0.5%	0.6%	0.36%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Durable Plastic Items	0.9%	1.0%	0.58%	Other Batteries	0.1%	0.1%	0.05%
Film	2.4%	2.7%	1.67%	Paint	0.0%	0.0%	0.00%
Grocery/Merchandise Bags	0.3%	0.1%	0.09%	Sharps	0.0%	0.0%	0.00%
Other Film	2.9%	1.4%	0.83%	Vehicle & Equipment Fluids	0.2%	0.3%	0.17%
Pallets - Plastic	0.0%	0.0%	0.00%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.0%	0.0%	0.00%
R/C Plastic	4.3%	3.3%	1.98%	Pesticides & Fertilizers	0.1%	0.1%	0.08%
Metal	4.6%			Other Hazardous Waste & HHW	0.1%	0.2%	0.10%
Alc. Beverage Containers	0.0%	0.0%	0.02%	Electronics	1.3%		
Alc. CT Dep. Bev. Containers	0.1%	0.0%	0.01%	Computer-related Electronics	1.3%	2.2%	1.34%
Tin/Steel Containers	2.5%	2.8%	1.71%	Other Small Consumer Electronics	0.0%	0.0%	0.01%
Other Ferrous	0.2%	0.2%	0.11%	TVs and Computer Monitors	0.0%	0.0%	0.00%
Other Non-Ferrous	0.5%	0.6%	0.37%	Other Large Electronics	0.0%	0.0%	0.00%
Appliances	0.0%	0.0%	0.00%	Other Waste	7.6%		
Compressed Fuel Containers	0.0%	0.0%	0.00%	Bulky Items	1.5%	2.6%	1.56%
R/C Metal	1.3%	1.8%	1.07%	Textiles (other than carpet)	0.6%	0.5%	0.30%
Glass	2.6%			Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Clear & Amber Glass Containers	1.1%	0.4%	0.22%	Bottom Fines & Dirt	1.0%	0.5%	0.31%
Green & Other Colored Glass Cont.	0.2%	0.2%	0.15%	Other Miscellaneous	4.4%	6.9%	4.19%
Glass CT Dep. Bev. Containers	0.6%	0.4%	0.27%	Totals	100.0%		
Flat Glass - Uncoated	0.5%	0.9%	0.53%	Sample Count	12		
R/C Glass	0.2%	0.2%	0.09%				

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

CRRA Southeast Project (Preston)

At the CRRA Southeast Project facility, 23 samples were collected and sampled: 12 residential and 11 ICI. The overall, residential, and ICI results for the CRRA Southeast Project are found in this section.

Overall Waste-CRRA Southeast Project (Preston)

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	27.7%			Organics	25.6%		
OCC/Kraft Paper	6.0%	1.6%	0.95%	Food Waste	19.6%	4.0%	2.40%
Offshore Cardboard	0.4%	0.3%	0.19%	Branches & Stumps	0.0%	0.0%	0.00%
High Grade Office Paper	2.2%	1.1%	0.66%	Prunings & Trimmings	1.3%	1.3%	0.78%
Magazines/Catalogs	1.5%	0.5%	0.33%	Leaves & Grass	0.5%	0.8%	0.48%
Newsprint	1.3%	0.6%	0.36%	Manures	0.0%	0.0%	0.00%
Phone Books & Directories	0.2%	0.2%	0.09%	R/C Organic	4.2%	1.6%	0.99%
Other Recyclable Paper	4.2%	0.8%	0.48%				
Compostable Paper	9.1%	2.2%	1.31%	Construction and Demolition	10.9%		
R/C Paper	2.9%	1.0%	0.60%	Asphalt, Brick, & Concrete	0.0%	0.0%	0.00%
				Wood - Treated	5.2%	3.4%	2.05%
Plastic	15.3%			Wood - Untreated	1.3%	1.5%	0.90%
PET Bottles/Jars (non-haz)	0.8%	0.3%	0.19%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.1%	0.1%	0.03%	Drywall/Gypsum Board	0.0%	0.0%	0.00%
Plastic CT Dep. Bev. Containers	0.2%	0.1%	0.05%	Carpet	2.3%	1.9%	1.13%
HDPE Bottles (non-haz)	0.5%	0.2%	0.10%	Carpet Padding	0.8%	0.9%	0.55%
HDPE Containers other than Bottles	0.1%	0.1%	0.08%	R/C C&D	1.3%	1.4%	0.84%
Plastic Containers #3-#7 (non-haz)	1.1%	0.8%	0.48%				
Expanded Poly. Non-Food Grade	0.5%	0.5%	0.30%	Household Hazardous Waste (HHW)	1.0%		
Expanded Poly. Food-grade	0.7%	0.2%	0.12%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.00%
Durable Plastic Items	2.4%	1.4%	0.87%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Film	0.2%	0.1%	0.09%	Other Batteries	0.1%	0.0%	0.02%
Grocery/Merchandise Bags	0.5%	0.1%	0.09%	Paint	0.0%	0.0%	0.00%
Other Film	4.6%	1.0%	0.64%	Sharps	0.0%	0.0%	0.00%
Pallets - Plastic	0.0%	0.0%	0.00%	Vehicle & Equipment Fluids	0.1%	0.2%	0.11%
R/C Plastic	3.6%	2.7%	1.64%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.6%	0.5%	0.28%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	4.8%			Other Hazardous Waste & HHW	0.2%	0.3%	0.15%
Alc. Beverage Containers	0.0%	0.0%	0.01%				
Alc. CT Dep. Bev. Containers	0.1%	0.1%	0.04%	Electronics	1.9%		
Tin/Steel Containers	0.5%	0.2%	0.10%	Computer-related Electronics	0.2%	0.4%	0.25%
Other Ferrous	0.5%	0.3%	0.20%	Other Small Consumer Electronics	0.5%	0.4%	0.23%
Other Non-Ferrous	0.4%	0.1%	0.08%	TVs and Computer Monitors	0.8%	1.4%	0.84%
Appliances	2.5%	2.7%	1.64%	Other Large Electronics	0.4%	0.6%	0.37%
Compressed Fuel Containers	0.0%	0.0%	0.00%				
R/C Metal	0.7%	0.4%	0.26%	Other Waste	10.9%		
				Bulky Items	4.0%	4.2%	2.56%
Glass	1.9%			Textiles (other than carpet)	3.0%	1.2%	0.74%
Clear & Amber Glass Containers	1.0%	0.4%	0.26%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.3%	0.3%	0.18%	Bottom Fines & Dirt	1.5%	0.5%	0.30%
Glass CT Dep. Bev. Containers	0.3%	0.3%	0.17%	Other Miscellaneous	2.3%	1.2%	0.70%
Flat Glass - Uncoated	0.0%	0.0%	0.00%				
R/C Glass	0.2%	0.2%	0.11%				
				Totals	100.0%		
				Sample Count	23		

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

Residential Waste-CRRA Southeast Project (Preston)

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	23.6%			Organics	24.9%		
OCC/Kraft Paper	3.9%	2.2%	1.36%	Food Waste	15.3%	6.2%	3.75%
Offshore Cardboard	0.6%	0.6%	0.35%	Branches & Stumps	0.0%	0.0%	0.00%
High Grade Office Paper	1.9%	1.6%	0.96%	Prunings & Trimmings	1.9%	2.3%	1.40%
Magazines/Catalogs	1.3%	0.6%	0.36%	Leaves & Grass	0.9%	1.4%	0.88%
Newsprint	1.0%	0.3%	0.21%	Manures	0.0%	0.0%	0.00%
Phone Books & Directories	0.4%	0.3%	0.16%	R/C Organic	6.8%	2.8%	1.72%
Other Recyclable Paper	3.6%	1.0%	0.58%				
Compostable Paper	8.4%	2.2%	1.37%	Construction and Demolition	12.8%		
R/C Paper	2.4%	1.0%	0.63%	Asphalt, Brick, & Concrete	0.0%	0.0%	0.00%
				Wood - Treated	5.1%	4.5%	2.72%
Plastic	13.0%			Wood - Untreated	1.0%	1.2%	0.75%
PET Bottles/Jars (non-haz)	0.6%	0.3%	0.15%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.1%	0.1%	0.05%	Drywall/Gypsum Board	0.0%	0.0%	0.00%
Plastic CT Dep. Bev. Containers	0.2%	0.1%	0.06%	Carpet	4.2%	3.4%	2.06%
HDPE Bottles (non-haz)	0.5%	0.3%	0.17%	Carpet Padding	1.4%	1.6%	1.00%
HDPE Containers other than Bottles	0.1%	0.1%	0.08%	R/C C&D	1.2%	1.4%	0.82%
Plastic Containers #3-#7 (non-haz)	0.6%	0.2%	0.14%				
Expanded Poly. Non-Food Grade	0.1%	0.1%	0.03%	Household Hazardous Waste (HHW)	0.2%		
Expanded Poly. Food-grade	0.5%	0.2%	0.14%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.00%
Durable Plastic Items	3.3%	2.3%	1.39%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Film	0.2%	0.2%	0.15%	Other Batteries	0.1%	0.1%	0.03%
Grocery/Merchandise Bags	0.5%	0.2%	0.14%	Paint	0.0%	0.0%	0.00%
Other Film	4.0%	1.3%	0.77%	Sharps	0.0%	0.0%	0.00%
Pallets - Plastic	0.0%	0.0%	0.00%	Vehicle & Equipment Fluids	0.0%	0.0%	0.00%
R/C Plastic	2.2%	1.0%	0.62%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.0%	0.0%	0.01%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	6.7%			Other Hazardous Waste & HHW	0.1%	0.1%	0.06%
Alc. Beverage Containers	0.0%	0.0%	0.01%				
Alc. CT Dep. Bev. Containers	0.1%	0.1%	0.04%	Electronics	1.9%		
Tin/Steel Containers	0.6%	0.3%	0.17%	Computer-related Electronics	0.5%	0.7%	0.45%
Other Ferrous	0.4%	0.5%	0.32%	Other Small Consumer Electronics	0.7%	0.7%	0.40%
Other Non-Ferrous	0.4%	0.2%	0.12%	TVs and Computer Monitors	0.0%	0.0%	0.00%
Appliances	4.5%	4.9%	2.98%	Other Large Electronics	0.7%	1.1%	0.68%
Compressed Fuel Containers	0.0%	0.0%	0.00%				
R/C Metal	0.7%	0.5%	0.30%	Other Waste	14.7%		
				Bulky Items	7.3%	7.7%	4.67%
Glass	2.2%			Textiles (other than carpet)	4.3%	1.8%	1.08%
Clear & Amber Glass Containers	1.2%	0.4%	0.26%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.3%	0.4%	0.27%	Bottom Fines & Dirt	1.1%	0.5%	0.32%
Glass CT Dep. Bev. Containers	0.3%	0.3%	0.17%	Other Miscellaneous	2.0%	1.5%	0.93%
Flat Glass - Uncoated	0.0%	0.0%	0.00%				
R/C Glass	0.4%	0.3%	0.21%	Totals	100.0%		
				Sample Count	12		

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

ICI Waste-CRRA Southeast Project (Preston)

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	32.6%			Organics	26.4%		
OCC/Kraft Paper	8.4%	2.2%	1.33%	Food Waste	24.8%	4.5%	2.75%
Offshore Cardboard	0.1%	0.1%	0.05%	Branches & Stumps	0.0%	0.0%	0.00%
High Grade Office Paper	2.5%	1.4%	0.88%	Prunings & Trimmings	0.5%	0.6%	0.34%
Magazines/Catalogs	1.8%	1.0%	0.58%	Leaves & Grass	0.0%	0.0%	0.01%
Newsprint	1.6%	1.2%	0.75%	Manures	0.0%	0.0%	0.00%
Phone Books & Directories	0.1%	0.1%	0.07%	R/C Organic	1.1%	1.1%	0.69%
Other Recyclable Paper	4.9%	1.3%	0.81%				
Compostable Paper	9.9%	3.9%	2.38%	Construction and Demolition	8.6%		
R/C Paper	3.4%	1.8%	1.10%	Asphalt, Brick, & Concrete	0.0%	0.0%	0.00%
				Wood - Treated	5.3%	5.1%	3.12%
Plastic	18.1%			Wood - Untreated	1.8%	2.9%	1.79%
PET Bottles/Jars (non-haz)	1.1%	0.6%	0.37%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.1%	0.1%	0.04%	Drywall/Gypsum Board	0.0%	0.0%	0.00%
Plastic CT Dep. Bev. Containers	0.2%	0.1%	0.08%	Carpet	0.0%	0.0%	0.00%
HDPE Bottles (non-haz)	0.5%	0.1%	0.05%	Carpet Padding	0.0%	0.0%	0.00%
HDPE Containers other than Bottles	0.2%	0.2%	0.15%	R/C C&D	1.6%	2.6%	1.57%
Plastic Containers #3-#7 (non-haz)	1.6%	1.7%	1.05%				
Expanded Poly. Non-Food Grade	0.9%	1.1%	0.66%	Household Hazardous Waste (HHW)	1.9%		
Expanded Poly. Food-grade	0.9%	0.4%	0.21%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.00%
Durable Plastic Items	1.3%	1.5%	0.94%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Film	0.1%	0.1%	0.07%	Other Batteries	0.0%	0.0%	0.02%
Grocery/Merchandise Bags	0.3%	0.2%	0.10%	Paint	0.0%	0.0%	0.00%
Other Film	5.4%	1.7%	1.06%	Sharps	0.0%	0.0%	0.00%
Pallets - Plastic	0.0%	0.0%	0.00%	Vehicle & Equipment Fluids	0.2%	0.4%	0.25%
R/C Plastic	5.4%	5.9%	3.56%	Empty Metal, Glass, & Plastic Cont. (Haz.)	1.3%	1.0%	0.63%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	2.6%			Other Hazardous Waste & HHW	0.3%	0.5%	0.33%
Alc. Beverage Containers	0.0%	0.0%	0.02%				
Alc. CT Dep. Bev. Containers	0.2%	0.1%	0.08%	Electronics	2.0%		
Tin/Steel Containers	0.5%	0.2%	0.10%	Computer-related Electronics	0.0%	0.0%	0.00%
Other Ferrous	0.6%	0.3%	0.21%	Other Small Consumer Electronics	0.2%	0.3%	0.16%
Other Non-Ferrous	0.5%	0.2%	0.10%	TVs and Computer Monitors	1.8%	3.1%	1.87%
Appliances	0.0%	0.0%	0.00%	Other Large Electronics	0.0%	0.0%	0.00%
Compressed Fuel Containers	0.0%	0.0%	0.00%				
R/C Metal	0.8%	0.7%	0.45%	Other Waste	6.2%		
				Bulky Items	0.0%	0.0%	0.00%
Glass	1.6%			Textiles (other than carpet)	1.5%	1.6%	0.98%
Clear & Amber Glass Containers	0.8%	0.8%	0.48%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.3%	0.4%	0.23%	Bottom Fines & Dirt	1.9%	0.9%	0.54%
Glass CT Dep. Bev. Containers	0.4%	0.5%	0.31%	Other Miscellaneous	2.7%	1.8%	1.07%
Flat Glass - Uncoated	0.0%	0.0%	0.00%				
R/C Glass	0.0%	0.0%	0.01%				
				Totals	100.0%		
				Sample Count	11		

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

CRRA Mid-CT Project (Hartford)

At the Mid-CT Project (Hartford) facility, 34 samples were collected and sampled: 6 residential and 28 ICI. The overall, residential, and ICI results for the CRRA Mid-CT Project are found in this section.

Overall Waste-CRRA Mid-CT Project (Hartford)

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	32.6%			Organics	19.2%		
OCC/Kraft Paper	4.5%	1.3%	0.76%	Food Waste	13.2%	3.1%	1.91%
Offshore Cardboard	0.9%	0.4%	0.22%	Branches & Stumps	0.1%	0.2%	0.12%
High Grade Office Paper	1.8%	1.0%	0.61%	Prunings & Trimmings	1.3%	0.6%	0.34%
Magazines/Catalogs	1.4%	0.5%	0.29%	Leaves & Grass	1.7%	2.0%	1.21%
Newsprint	4.3%	3.0%	1.81%	Manures	0.0%	0.0%	0.00%
Phone Books & Directories	0.4%	0.3%	0.19%	R/C Organic	2.9%	0.7%	0.40%
Other Recyclable Paper	3.7%	0.6%	0.39%				
Compostable Paper	10.9%	2.0%	1.24%	Construction and Demolition	15.5%		
R/C Paper	4.8%	2.6%	1.59%	Asphalt, Brick, & Concrete	0.0%	0.0%	0.00%
				Wood - Treated	4.1%	1.5%	0.94%
Plastic	15.6%			Wood - Untreated	2.3%	0.8%	0.51%
PET Bottles/Jars (non-haz)	0.6%	0.1%	0.06%	Asphalt Roofing	0.1%	0.1%	0.07%
PET Containers-non bottles (non-haz)	0.1%	0.1%	0.06%	Drywall/Gypsum Board	0.6%	0.8%	0.51%
Plastic CT Dep. Bev. Containers	0.1%	0.1%	0.09%	Carpet	6.9%	8.9%	5.43%
HDPE Bottles (non-haz)	0.5%	0.2%	0.12%	Carpet Padding	0.3%	0.5%	0.30%
HDPE Containers other than Bottles	0.1%	0.1%	0.07%	R/C C&D	1.3%	1.0%	0.63%
Plastic Containers #3-#7 (non-haz)	0.4%	0.1%	0.05%				
Expanded Poly. Non-Food Grade	0.1%	0.1%	0.04%	Household Hazardous Waste (HHW)	1.0%		
Expanded Poly. Food-grade	0.4%	0.2%	0.10%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.01%
Durable Plastic Items	3.9%	3.1%	1.86%	Batteries - Lead Acid	0.0%	0.1%	0.03%
Film	0.3%	0.2%	0.11%	Other Batteries	0.0%	0.0%	0.01%
Grocery/Merchandise Bags	0.5%	0.1%	0.07%	Paint	0.0%	0.0%	0.00%
Other Film	4.7%	1.3%	0.78%	Sharps	0.0%	0.0%	0.00%
Pallets - Plastic	0.3%	0.5%	0.30%	Vehicle & Equipment Fluids	0.0%	0.1%	0.03%
R/C Plastic	3.3%	1.1%	0.66%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.2%	0.1%	0.07%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	2.6%			Other Hazardous Waste & HHW	0.6%	0.9%	0.52%
Alc. Beverage Containers	0.0%	0.0%	0.01%				
Alc. CT Dep. Bev. Containers	0.2%	0.2%	0.09%	Electronics	2.3%		
Tin/Steel Containers	0.8%	0.2%	0.15%	Computer-related Electronics	0.4%	0.6%	0.33%
Other Ferrous	0.6%	0.5%	0.27%	Other Small Consumer Electronics	0.4%	0.3%	0.20%
Other Non-Ferrous	0.6%	0.1%	0.09%	TVs and Computer Monitors	1.4%	1.9%	1.13%
Appliances	0.0%	0.0%	0.00%	Other Large Electronics	0.1%	0.2%	0.11%
Compressed Fuel Containers	0.0%	0.0%	0.00%				
R/C Metal	0.4%	0.2%	0.13%	Other Waste	9.3%		
				Bulky Items	2.0%	1.5%	0.93%
Glass	1.8%			Textiles (other than carpet)	4.4%	2.1%	1.26%
Clear & Amber Glass Containers	0.8%	0.8%	0.46%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.2%	0.2%	0.13%	Bottom Fines & Dirt	1.6%	0.6%	0.39%
Glass CT Dep. Bev. Containers	0.2%	0.1%	0.06%	Other Miscellaneous	1.3%	0.5%	0.32%
Flat Glass - Uncoated	0.3%	0.3%	0.18%				
R/C Glass	0.3%	0.1%	0.09%				
				Totals	100.0%		
				Sample Count	34		

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

Residential Waste-CRRA Mid-CT Project (Hartford)

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	35.5%			Organics	23.2%		
OCC/Kraft Paper	0.9%	0.9%	0.54%	Food Waste	14.6%	4.8%	2.93%
Offshore Cardboard	0.7%	0.2%	0.15%	Branches & Stumps	0.0%	0.0%	0.00%
High Grade Office Paper	1.4%	1.7%	1.01%	Prunings & Trimmings	1.0%	0.3%	0.20%
Magazines/Catalogs	1.8%	0.8%	0.51%	Leaves & Grass	3.1%	3.7%	2.22%
Newsprint	6.6%	5.5%	3.32%	Manures	0.0%	0.0%	0.00%
Phone Books & Directories	0.2%	0.4%	0.23%	R/C Organic	4.4%	1.0%	0.60%
Other Recyclable Paper	4.7%	0.9%	0.54%				
Compostable Paper	15.3%	3.3%	2.03%	Construction and Demolition	12.1%		
R/C Paper	3.9%	0.2%	0.10%	Asphalt, Brick, & Concrete	0.0%	0.0%	0.00%
				Wood - Treated	1.7%	1.9%	1.13%
Plastic	14.4%			Wood - Untreated	0.0%	0.0%	0.00%
PET Bottles/Jars (non-haz)	0.7%	0.0%	0.03%	Asphalt Roofing	0.1%	0.2%	0.13%
PET Containers-non bottles (non-haz)	0.1%	0.2%	0.12%	Drywall/Gypsum Board	0.1%	0.1%	0.07%
Plastic CT Dep. Bev. Containers	0.2%	0.3%	0.16%	Carpet	10.2%	16.4%	9.98%
HDPE Bottles (non-haz)	0.6%	0.3%	0.18%	Carpet Padding	0.0%	0.0%	0.00%
HDPE Containers other than Bottles	0.0%	0.1%	0.05%	R/C C&D	0.0%	0.0%	0.01%
Plastic Containers #3-#7 (non-haz)	0.6%	0.1%	0.08%				
Expanded Poly. Non-Food Grade	0.1%	0.1%	0.08%	Household Hazardous Waste (HHW)	0.3%		
Expanded Poly. Food-grade	0.5%	0.3%	0.19%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.00%
Durable Plastic Items	2.0%	2.8%	1.73%	Batteries - Lead Acid	0.0%	0.0%	0.00%
Film	0.3%	0.3%	0.17%	Other Batteries	0.1%	0.0%	0.01%
Grocery/Merchandise Bags	0.7%	0.2%	0.12%	Paint	0.0%	0.0%	0.00%
Other Film	6.0%	2.2%	1.36%	Sharps	0.0%	0.0%	0.00%
Pallets - Plastic	0.0%	0.0%	0.00%	Vehicle & Equipment Fluids	0.0%	0.1%	0.04%
R/C Plastic	2.5%	0.8%	0.46%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.2%	0.1%	0.08%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	2.8%			Other Hazardous Waste & HHW	0.1%	0.1%	0.05%
Alc. Beverage Containers	0.0%	0.0%	0.01%				
Alc. CT Dep. Bev. Containers	0.1%	0.0%	0.03%	Electronics	2.4%		
Tin/Steel Containers	1.2%	0.4%	0.27%	Computer-related Electronics	0.0%	0.0%	0.00%
Other Ferrous	0.4%	0.5%	0.30%	Other Small Consumer Electronics	0.4%	0.6%	0.34%
Other Non-Ferrous	0.8%	0.2%	0.15%	TVs and Computer Monitors	2.0%	3.4%	2.06%
Appliances	0.0%	0.0%	0.00%	Other Large Electronics	0.0%	0.0%	0.00%
Compressed Fuel Containers	0.0%	0.0%	0.00%				
R/C Metal	0.4%	0.3%	0.17%	Other Waste	7.7%		
				Bulky Items	0.0%	0.0%	0.00%
Glass	1.5%			Textiles (other than carpet)	5.0%	3.7%	2.22%
Clear & Amber Glass Containers	0.9%	1.4%	0.83%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.0%	0.0%	0.01%	Bottom Fines & Dirt	2.4%	1.2%	0.71%
Glass CT Dep. Bev. Containers	0.2%	0.2%	0.10%	Other Miscellaneous	0.4%	0.2%	0.15%
Flat Glass - Uncoated	0.0%	0.0%	0.03%				
R/C Glass	0.4%	0.2%	0.15%				
				Totals	100.0%		
				Sample Count	6		

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

ICI Waste-CRRA Mid-CT Project (Hartford)

Material	Est. Percent	+ / -	Stand. Dev.	Material	Est. Percent	+ / -	Stand. Dev.
Paper	29.1%			Organics	14.6%		
OCC/Kraft Paper	8.7%	2.5%	1.54%	Food Waste	11.5%	3.8%	2.32%
Offshore Cardboard	1.0%	0.7%	0.45%	Branches & Stumps	0.3%	0.4%	0.26%
High Grade Office Paper	2.3%	1.0%	0.60%	Prunings & Trimmings	1.6%	1.2%	0.70%
Magazines/Catalogs	0.9%	0.4%	0.22%	Leaves & Grass	0.2%	0.3%	0.17%
Newsprint	1.6%	0.9%	0.54%	Manures	0.0%	0.0%	0.00%
Phone Books & Directories	0.6%	0.5%	0.32%	R/C Organic	1.1%	0.8%	0.49%
Other Recyclable Paper	2.5%	0.9%	0.55%				
Compostable Paper	5.7%	2.1%	1.26%	Construction and Demolition	19.6%		
R/C Paper	5.8%	5.7%	3.47%	Asphalt, Brick, & Concrete	0.0%	0.0%	0.00%
				Wood - Treated	6.9%	2.5%	1.54%
Plastic	17.0%			Wood - Untreated	5.0%	1.8%	1.12%
PET Bottles/Jars (non-haz)	0.5%	0.2%	0.12%	Asphalt Roofing	0.0%	0.0%	0.00%
PET Containers-non bottles (non-haz)	0.0%	0.0%	0.01%	Drywall/Gypsum Board	1.3%	1.8%	1.11%
Plastic CT Dep. Bev. Containers	0.1%	0.1%	0.04%	Carpet	2.9%	1.8%	1.11%
HDPE Bottles (non-haz)	0.4%	0.3%	0.16%	Carpet Padding	0.7%	1.1%	0.65%
HDPE Containers other than Bottles	0.2%	0.2%	0.14%	R/C C&D	2.7%	2.3%	1.38%
Plastic Containers #3-#7 (non-haz)	0.3%	0.1%	0.07%				
Expanded Poly. Non-Food Grade	0.1%	0.1%	0.03%	Household Hazardous Waste (HHW)	1.8%		
Expanded Poly. Food-grade	0.2%	0.1%	0.05%	Ballasts, CFLs, & Other FLs	0.0%	0.0%	0.03%
Durable Plastic Items	6.3%	5.8%	3.51%	Batteries - Lead Acid	0.1%	0.1%	0.08%
Film	0.4%	0.2%	0.13%	Other Batteries	0.0%	0.0%	0.01%
Grocery/Merchandise Bags	0.2%	0.1%	0.07%	Paint	0.0%	0.0%	0.00%
Other Film	3.2%	0.9%	0.55%	Sharps	0.0%	0.0%	0.00%
Pallets - Plastic	0.7%	1.1%	0.65%	Vehicle & Equipment Fluids	0.0%	0.1%	0.05%
R/C Plastic	4.3%	2.2%	1.33%	Empty Metal, Glass, & Plastic Cont. (Haz.)	0.3%	0.2%	0.12%
				Pesticides & Fertilizers	0.0%	0.0%	0.00%
Metal	2.3%			Other Hazardous Waste & HHW	1.3%	1.9%	1.14%
Alc. Beverage Containers	0.0%	0.0%	0.01%				
Alc. CT Dep. Bev. Containers	0.3%	0.3%	0.20%	Electronics	2.2%		
Tin/Steel Containers	0.4%	0.1%	0.07%	Computer-related Electronics	0.9%	1.2%	0.73%
Other Ferrous	0.9%	0.8%	0.48%	Other Small Consumer Electronics	0.4%	0.3%	0.18%
Other Non-Ferrous	0.3%	0.2%	0.10%	TVs and Computer Monitors	0.6%	0.6%	0.38%
Appliances	0.0%	0.0%	0.00%	Other Large Electronics	0.2%	0.4%	0.23%
Compressed Fuel Containers	0.0%	0.0%	0.00%				
R/C Metal	0.4%	0.3%	0.20%	Other Waste	11.2%		
				Bulky Items	4.3%	3.3%	2.02%
Glass	2.2%			Textiles (other than carpet)	3.8%	1.3%	0.81%
Clear & Amber Glass Containers	0.7%	0.4%	0.23%	Restaurant Fats, Oils, & Grease	0.0%	0.0%	0.00%
Green & Other Colored Glass Cont.	0.4%	0.5%	0.29%	Bottom Fines & Dirt	0.8%	0.3%	0.17%
Glass CT Dep. Bev. Containers	0.2%	0.1%	0.07%	Other Miscellaneous	2.3%	1.1%	0.68%
Flat Glass - Uncoated	0.6%	0.7%	0.40%				
R/C Glass	0.3%	0.2%	0.10%	Totals	100.0%		
				Sample Count	28		

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

Preparations for Next Round of Sampling

The Project Team expects to conduct additional surveying of trucks at the five facilities during the summer to finalize the allocation between residential and ICI waste at each facility. The results of the second round of surveying will be used to refine the allocation of samples at each facility between residential and ICI.

The second round of sampling will then occur during the late fall, with the final data presented as percentages, and, statewide, in tonnages.