Village of Oak Park
Material Characterization Study & Opportunity Assessment

Prepared for:

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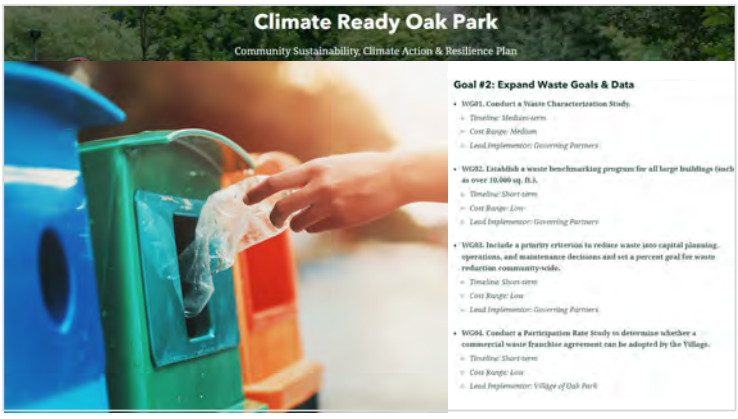
1 ACKNOWLEDGMENTS

This Material Characterization Study and Opportunity Assessment Report was completed with the support of both the Village of Oak Park and Lakeshore Recycling Systems (LRS). The Village of Oak Park (Village) initiated the project, and was essential in coordinating with LRS to host the material sort at their Maywood Facility. LRS worked closely with SCS Engineers (SCS) to maintain proper handling and delivery of municipal solid waste (MSW) also known as garbage, recycling, and organics samples. The coordinated efforts and assistance provided by both the Village of Oak Park and LRS were critical to the effective execution of the material sort.

2 EXECUTIVE SUMMARY



The Village initiated its first residential **material characterization study** to complete a critical step of the **Climate Ready Oak Park (CROP) action plan**. Obtaining composition data specific to the Village allows for a more accurate Greenhouse Gas inventory and to better inform environmental programs, policy, and planning. The study was conducted by SCS at LRS' Maywood Facility and consisted of MSW, recycling, and organics collected from single-family and multi-family residences (5-units or less). The purpose of the material characterization study was to analyze the composition of the MSW and recycling stream, analyze the composition of contamination in the organics stream, and **identify opportunities for waste reduction and improved diversion.** Following the study, a community survey was distributed to local residents through the EngageOakPark system to gather insights on residents' waste management practices, identify obstacles to recycling and composting, and understand behaviors that can drive change. The material characterization study and the survey were used to summarize practical strategies to progress in the CROP action plan.

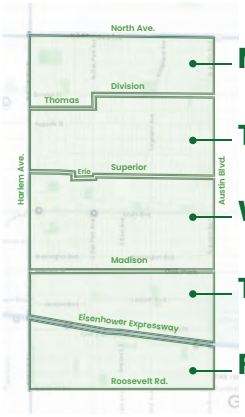
A total of **60** samples

Material Stream Categories

25	25	10
Municipal Solid Waste	Recyclables	Organics

To complete the study, SCS used ASTM Standard D5231-92 (2024) and USEPA Volume to Weight Conversions to establish standards and procedures for sampling and sorting. Distinct categories for each material stream (MSW, recyclables, and organics contamination) were prepared in coordination with the Village to detail the composition of each stream. A total of 60 samples (25 MSW, 25 recycling, and 10 organics) were collected and sorted. The samples were collected across all service zones; identified by the collection day (Monday – Friday). Each sample was manually sorted, weighed, and documented using standardized forms. Statistical methods were applied to calculate mean composition values and confidence intervals for each material category.

Across all service zones and identified by collection day



- Monday
- Tuesday
- Wednesday
- Thursday
- Friday

- Collected
- Sorted
- Weighed

Material Characterization Findings

Scorecard	US average	Suburban Cook County [4]	Village of Oak Park [5]
Pounds of materials generated per person per year	1,788.5 [1]	2,960.2	1,261.70
Recycling Contamination	16.9% [3]	Unknown	8.8%
Diversion Rate	32.1% [2]	27.0%	39.5%
Recycling Rate	23.6% [2]	18.0%	28.8%

1) USEPA 2018; 2) Recycling Partnership 2024; 3) Recycling Partnership 2022; 4) Cook County Solid Waste Management Plan 2024-2029; 5) Village of Oak Park 2024

The Scorecard highlights the advanced material management system and culture established within the Village. Residents are disposing of less material while maintaining a higher recycling rate and diversion (recycling and organics) rate compared to national and suburban Cook County averages.

Organics present the greatest diversion opportunity.
Organics comprise approximately 36.6 percent of the MSW stream, with unpackaged food waste accounting for 18.7 percent of total disposed material. This represents a significant opportunity to reduce landfill disposal and associated GHG emissions through expanded composting participation.

Recoverable materials remain in the trash despite strong participation.
Paper (21.1 percent) and plastics (15.7 percent) together account for more than one-third of MSW, much of which is recyclable through existing Village programs.

Recycling contamination is relatively low.
Approximately 90 percent of materials placed in recycling carts meet Village guidelines, with contamination primarily from refuse, plastic bags and films, and non-recyclable metals.

Organics contamination is minimal but targeted.
Organics collected through the CompostAble program contained approximately 4 percent contamination by weight, largely from non-compostable paper, rocks/soil/sand, construction debris, and recyclable packaging.

Route-based variation suggests targeted outreach may be effective.
Differences in composition and contamination by collection day indicate opportunities for focused education and engagement in specific service zones.

Community Survey Insights

A complementary community survey distributed through EngageOakPark received over 1,100 responses and showed strong environmental awareness and participation:

- 99 percent of respondents report recycling regularly, and 63 percent compost in some manner.
- The most common barriers include confusion about acceptable materials, limited curbside options for certain waste types, and concerns about composting logistics.
- Financial incentives and clear education were identified as the most effective tools to increase participation.

Strategic Implications

Overall, the findings indicate that Oak Park residents are highly engaged and generally successful in separating materials, while meaningful diversion potential remains, particularly for food waste and recyclable materials disposed in MSW. Targeted education, expanded composting participation, and incentive-based strategies offer clear opportunities to further reduce landfill disposal and advance the Village's climate and sustainability goals.

3 INTRODUCTION & BACKGROUND

The Village is a home-rule municipal corporation located in the greater Chicago area. Prior to this study, the Village had conducted Greenhouse Gas emission calculations to support its climate action efforts and had implemented several waste diversion programs aimed at expanding sustainability practices. To support the Village's climate action initiatives, SCS was contracted to conduct a material characterization study of MSW, recycling, and organics generated by residential households (single family homes and households with 5-units or less). This material characterization study marked the first of its kind conducted within the Village and was designed to provide a detailed understanding of the composition of residential waste streams.

The purpose of the study was to analyze the materials found in MSW (waste collected for disposal), recyclables (curbside collection of paper, plastic, glass, and metal), and organics contamination (contamination found in organics collected for composting through the Village's yard waste and CompostAble programs) collected from single-family and multi-family (5-units or less) residential properties. By examining the types and quantities of materials in these streams, the study aimed to **identify common disposal patterns and obtain data to support improved waste management practices.** The primary objectives of the material characterization study were to identify and categorize MSW, recyclables, and contamination in the organics stream and to develop recommendations for improving waste diversion and reducing waste generation. Data collected during the waste sort was used to inform recommendations presented in this report.

CLIMATE READY OAK PARK (CROP) GOALS

GOAL #2: Expand Waste Goals & Data

- WG01. Conduct a Waste Characterization Study

MATERIAL CHARACTERIZATION STUDY GOALS

Identify common disposal patterns and obtain data to:

- Support **improved waste management practices.**
- Develop recommendations for **improving waste diversion and reducing waste generation**.
- Data collected during the waste sort was used to **inform recommendations presented in this report**.

After the completion of the material characterization study, the Village initiated a community survey distributed to residents via the EngageOakPark platform. This survey aimed to collect detailed information about local waste management habits, uncover specific challenges associated with recycling and composting, and gain a deeper understanding of resident behaviors that could influence positive change. The findings from both the material characterization study and the community survey were combined to develop and summarize actionable strategies designed to advance the objectives outlined in the CROP action plan. These efforts reflect a coordinated approach to improving waste diversion, increasing community awareness, and fostering sustainable practices throughout the Village.

4 SOLID WASTE/RECYCLABLES/ORGANICS STANDARDS

To maintain consistency, representative sampling across the different material streams, specific standards and guidelines were applied for MSW, recycling, and organics materials. For MSW, the study followed the ASTM International Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste (ASTM D5231-92, Revised 2024), which specifies a sample weight of approximately 200 to 220 pounds to accurately reflect the composition of the waste stream.

For recycling and organics contamination, the characterization study utilized the EPA Volume-to-Weight Conversion Factors (2016) to identify a volume-based sample that correlates to an approximate weight of materials to set a target weight for each sample. To collect a representative sample for recycling, two (2) 95-gallon containers were collected yielding an estimated 100 pounds of material. For organics, two (2) 95-gallon containers of material were collected to constitute a sample with an estimated weight of 200 pounds.

The material categories for MSW were guided by the Illinois Commodity/Waste Generation and Characterization Study Update (2015). The 2015 Illinois study served as the primary reference for defining material categories, although some adjustments were made in coordination with the Village to better align with the scope and objectives of this material characterization study.

Each sample stream was sorted into a different subset of categories, or material components that were recommended by SCS and approved by the Village. The material categories and components are described below:

	Material **Categories**	Material **Components**
MSW	11	68
Recycling	6	42
Organics	5	24

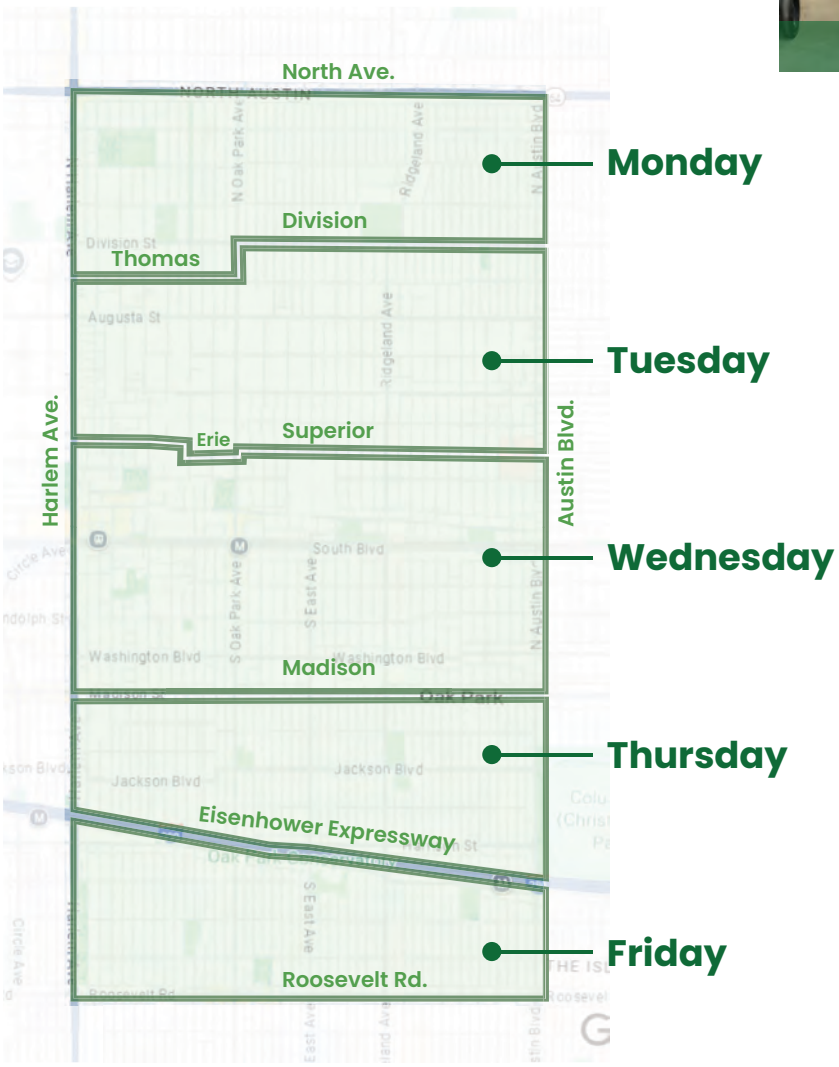
- MSW was sorted into 68 material components that consisted of 11 material categories including Paper, Beverage/Food Containers, Plastics, Glass, Metals, Organics, Textiles, In-Organics, Construction and Demolition Debris (C&D), Household Hazardous Waste (HHW), and Other Wastes.
- Recycling was sorted into 42 material components that consisted of 6 material categories including Paper, Plastics, Metals, Glass, Contaminated Recyclables, and Miscellaneous Contamination.
- Organics contamination was sorted into 24 material components that consisted of 5 material categories including Paper, Plastics, Metals, Glass, and Miscellaneous Contamination.

A description and definition of the material categories used for each material stream is provided in **Attachment A.**

5 ASSESSMENT OF EXISTING MATERIAL MANAGEMENT SYSTEMS

LRS serves as the waste collection and hauler for the Village's residential MSW, recycling, and organics collection programs. Collection of each material stream from residents within the Village occurs Monday through Friday. There are currently 11,149 active single-family and multi-family residences (5-units or less) within the Village that LRS services every week. The map provided below shows the waste collection schedule for the Village with key street names to identify major dividers in the collection zones.

Exhibit 1 | **Waste Collection Schedule**



11,149
Active **Customers**

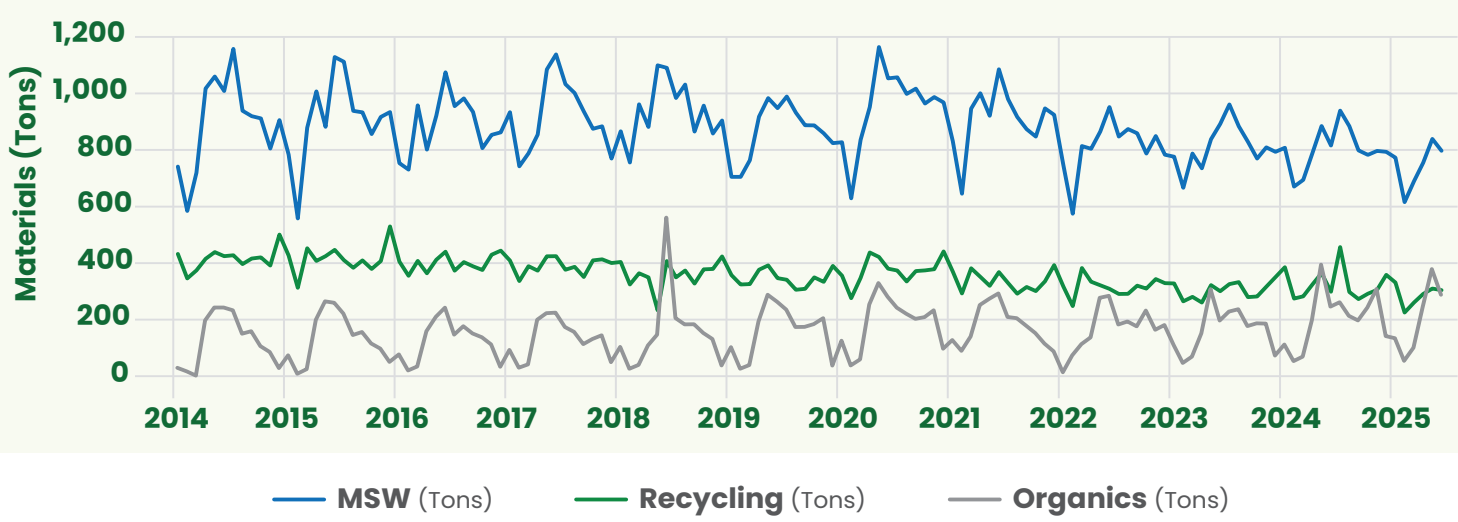
MSW

Recycling

Organics

Over the past 10 years (2014 – 2024) the Village has seen a decrease in tons (in weight) of MSW and recycling collected and an increase in tons of organics collected. The graph below shows the tonnage of materials collected within each stream as reported by Waste Connections/Groot (2014 – 2021) and LRS (2022 – June 2025).

Exhibit 2 | **MSW, Recycling, and Organics Collection Tonnage** (2014 - June 2025)



Diversion of recyclables and organic materials from landfills continues to be a priority for the Village. For the past decade, the Village's diversion rate has regularly been above **36.5%**, surpassing the typical rate of 30-35% seen in comparable municipalities throughout Chicagoland. The Village and LRS have implemented effective disposal options to improve diversion rates. Residents can use the Waste & Recycling webpage to schedule special pick-ups for electronics, textiles, hazardous waste, and bulky items, or find information on drop-off events for electronics and polystyrene. Additional resources are available for recycling plastic bags, films, paper shredding and wraps.

The Village launched a unique organics collection program called CompostAble as a pilot in 2012 and a Village-wide campaign in 2013. The CompostAble program is an opt-in program that provides curbside collection service of organic materials including yard waste and food scrap to single-family and multi-family residences (5-units or less). The program allows neighbors to share a single cart and split the bill. Organics are collected on a weekly basis from April – November and are collected every other week from December – May. The CompostAble program has 3,122 participants as of June 2025. Currently, the participation rate in the CompostAble program is at 28%. The program also includes drop-off locations throughout the Village for residents without access to the opt-in program to participate in the disposal of organics through the program. The partnership with LRS has also expanded organics collection in local schools to continue increasing awareness and education on the CompostAble program.

6 SOLID WASTE/RECYCLABLES/ ORGANICS CHARACTERIZATION STUDY METHODOLOGY

6.1 Sample Selection

To collect representative samples of material from each zone, SCS staff coordinated with LRS personnel to identify loads that were collected from the Village. Once a load was confirmed to contain MSW, recycling, or organics collected exclusively from the Village, the materials were tipped into separate piles in accordance with the Maywood Facility operations plan. MSW samples were tipped inside of the Transfer Station, recycling samples were tipped inside of the Material Recovery Facility (MRF), and organics samples were tipped in the designated organics collection area. Tipping of each sample was organized to prevent commingling of the sample with other vehicle loads in order to confirm that materials analyzed for this study were collected from the Village.

Due to safety constraints at the Maywood Facility, LRS personnel coordinated the MSW vehicle confirmation and oversaw the tipping procedures to confirm that material was not commingled with other vehicle loads. The SCS sampling manager was present for recycling and organics samples to confirm vehicles and oversee the tipping procedure to confirm that the materials were not commingled.

The tipped material piles were visually divided into six (6) equal segments, and a random number generator was used to select one of these segments for sample collection. For MSW samples, the selected segment was then brought to the SCS sample manager for confirmation before the sample was taken. For both recycling and organics samples, the SCS sample manager collected samples directly from the material piles immediately after they were tipped.

Each sample collected was assigned a unique identification number and documented using our sample data collection form. Each form included details such as the truck number, weather conditions, and the date and time of sample collection.

6.2 Sample Gathering

Once the MSW sample segment was identified by LRS personnel, the front-end loader operator brought the segment to the sample sort area for assessment by SCS. MSW samples were collected by placing 95-gallon and 64-gallon containers below the loader's bucket. The SCS team used rakes and shovels to manually distribute materials into these containers. The containers were then brought to a calibrated scale where SCS staff documented the weight (excluding tare weight) of the material in each container. Once the total sample met the target weight range of 200 – 220 pounds, the sample was staged for manual sorting and marked to identify containers. One sample was approximately equivalent to three (3) containers full of material.

For recycling samples, two (2) 95-gallon containers full of recyclables were used to define a sample based on the variation in material weight of the recycling stream. SCS staff collected each sample, documented the weight (excluding tare weight), labeled the samples, and staged the sample for manual sorting.

For organics samples, two (2) 95-gallon containers full of organic materials were used to define a sample. SCS staff collected each sample, documented the weight (excluding tare weight), labeled the samples, and staged the sample for manual sorting.

A total of 60 samples were collected to support the material characterization study. This included 25 samples of MSW, 25 samples of recycling, and 10 samples of organics.

6.3 Sample Sorting

The sorting process was led by an experienced SCS staff professional and supported by a trained sort crew, Career Choice Staffing (CCS). The sorting team completed daily Site-Specific Health and Safety discussions to maintain a safe sorting process.

The manual sorting of MSW and recycling samples followed a five-step process that is summarized below. This five-step process was repeated until all the samples were characterized. Samples were maintained in as-disposed conditions, or as close to this as possible, until the actual sorting began. Factors that might affect the conditions of the materials, such as compaction or exposure to rainfall, were mitigated by storing the samples indoors so that the composition or condition of the sample did not change.

MSW and Recycling – Manual Sorting Process

1. A sample of material is transferred from containers to a sort table and photographed; large or heavy items, such as wood panels or bulky waste, are placed directly into the appropriate container for subsequent weighing.

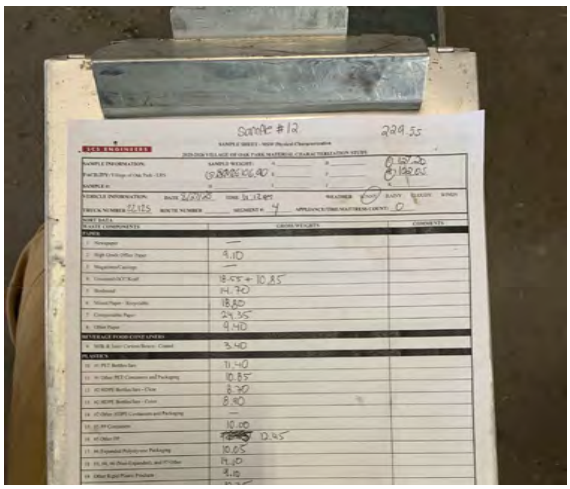
2. Plastic bags containing materials are opened and contents are manually sorted according to the agreed-upon list of materials; separated materials are placed in a unique container and this process continued until the sample was completely sorted; the SCS Sorting Manager oversaw operations and provided continual quality control of the sorted waste categories.

3. Sorting of materials continues until the sample has been characterized down to small indistinguishable particle size of 2 inches or less; a photograph of these materials is taken, and materials are removed from the sort table and placed in a separate container for weighing as "fines" (MSW) or "refuse" (Recycling).

4. Containers with the sorted materials are individually weighed by the SCS Sorting Manager who also performs additional quality control measures to confirm the purity of each sorted material category; tare weights of the empty containers and containers with the sorted materials are recorded on a sample data sheet which is unique for every sample; measurements are made to the nearest tenth of a pound.

   During this step, the volume consumed by the material in the container was recorded. SCS used consistent containers for the materials that have known volumes.

5. Upon completion of weighing sorted materials and recording the data for each sample, the materials are placed in a container for distribution to the next operation (landfill or MRF); containers were emptied as appropriate by the LRS team



The sorting process for contamination in the organics stream followed a similar procedure but deviated to only collect and sort contamination rather then the entire sample.

Organics Contamination – Manual Sorting Process

1. A sample of material is emptied onto the impervious floor and spread out to document the condition of the pile.
2. Contamination was identified and removed from the pile; material was placed in a single bin to collect the weight of contamination.
3. Contamination was manually sorted according to the agreed-upon list of materials; separated materials are placed in a unique container and this process continued until the sample was completely sorted; the SCS Sorting Manager oversaw operations and provided continual quality control of the sorted waste categories.

4. Containers with the sorted materials are individually weighed by the SCS Sorting Manager who also performs additional quality control measures to confirm the purity of each sorted material category; tare weights of the empty containers and containers with the sorted materials are recorded on a sample data sheet which is unique for every sample; measurements are made to the nearest tenth of a pound.

   During this step, the volume consumed by the material in the container was recorded. SCS used consistent containers for the materials that have known volumes.
5. Upon completion of weighing sorted materials and recording the data for each sample, the contamination was removed and disposed of either in the MSW or recycling containers, based on the composition of the material.

The timing of the sorting process varied by waste stream. MSW was generally sorted in the morning and into the afternoon after collection vehicles completed their routes. Recycling and organics contamination were collected in the afternoon / evening upon arrival of the collection vehicles and were sorted the following morning. This schedule allowed the team to sort the samples promptly and consistently across the study period.

6.4 Data Recording

SCS staff utilized standardized forms to document information for each material type, including the MSW Characterization Form, Recycling Characterization Form, and Organics Contamination Characterization Form. At the conclusion of each workday, SCS met with LRS personnel to review sampling activities, confirm alignment on selected loads and sample details. All field forms were verified for completeness and accuracy, then digitized for recordkeeping and future analysis.

SCS completed the recording of all project-related data. Each sample analyzed during the study was assigned a unique sample form, capturing all relevant information and measurements. Sample details and weight data were recorded immediately upon collection, followed by the weighing of individual components. To enhance tracking and quality control, a separate sample tracker document was maintained to monitor the number and source of samples obtained and sorted.

At the end of each fieldwork day, the SCS Sorting Manager conducted a review of all data, cross-referencing individual data sheets with the sample tracker to maintain consistency and accuracy in sample documentation.

6.5 Data Analysis

SCS conducted an evaluation of material composition across MSW, recycling, and organics contamination using data collected from the sorting activities. This analysis involved comparing material categories, identifying the most prevalent materials, and developing a detailed composition table. In addition to the overall assessment, SCS reviewed the composition of materials collected each day to evaluate consistency and variability over time. These findings are presented in the following section of the report.

To quantify material composition, SCS applied standard statistical procedures to calculate mean values and standard deviations for each component evaluated in the study. Data from various generating sectors were aggregated to produce an overall waste composition profile, and a 90 percent confidence interval was calculated for each material category.

Composition estimates were determined by calculating the ratio of each material component's weight to the total weight of all applicable samples. This was done by summing the weight of each component across relevant samples and dividing it by the cumulative sample weight.

7 SOLID WASTE/RECYCLABLES/ORGANICS CHARACTERIZATION STUDY RESULTS

From Monday, August 25, 2025, through Saturday, August 30, 2025, SCS sorted nearly 10,000 pounds of MSW, recycling, and organics contamination at the LRS facility in Maywood, Illinois. This section provides the detailed results of the study. The results presented in this section include overall waste composition and comparison between service zones.

7.1 MSW COMPOSITION

7.1.1 Overall MSW Composition

Table 1, on the next page, provides a list of the 11 material categories and the 68 material components within those categories that comprise the overall Village MSW stream. Definitions can be found in Attachment A.

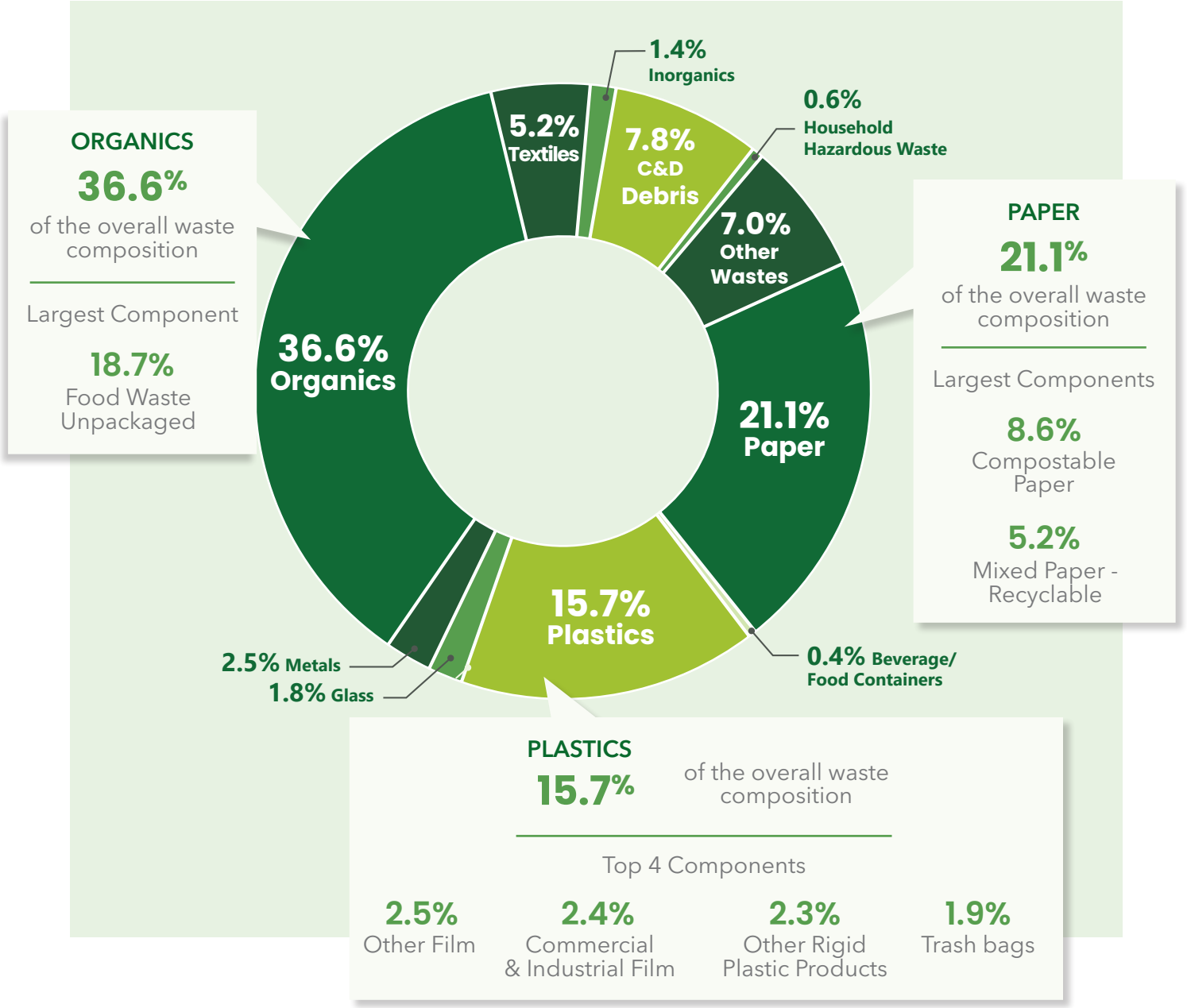
	Material **Categories**	Material **Components**
MSW	11	68
Recycling	6	42
Organics	5	24

Table 1 | MSW Material Categories and Components

Material **Category**	No. Material **Component**			
1 **Paper**	1	Newspaper	2	High Grade Office Paper
	3	Magazines/Catalogs	4	Uncoated OCC/Kraft
	5	Boxboard	6	Mixed Paper – Recyclable
	7	Compostable Paper	8	Other Paper
2 **Beverage/ Food Containers**	9	Milk & Juice Cartons/Boxes - Coated		
3. Plastics	10	#1 PET Bottles/Jars	11	#1 Other PET Containers & Packaging
	12	#2 HDPE Bottles/Jars – Clear	13	#2 HDPE Bottles/Jars – Color
	14	#2 Other HDPE Containers & Packaging	15	#5 PP Containers
	16	#5 Other PP	17	#6 Expanded Polystyrene Packaging
	18	#3, #4, #6 (Non-Expanded), and #7 Other	19	Other Rigid Plastic Products
	20	Grocery & Merchandise Bags	21	Trash Bags
	22	Commercial & Industrial Film	23	Other Film
	24	Other Plastic		
4 **Glass**	25	Recyclable Glass Bottles & Jars	26	Flat Glass
	27	Other Glass		
5 **Metals**	28	Aluminum Beverage Containers	29	Other Aluminum
	30	HVAC Ducting	31	Ferrous Containers (Tin Cans)
	32	Other Ferrous	33	Other Non-Ferrous
	34	Other Metal		
6 **Organics**	35	Yard Waste – Compostable	36	Yard Waste – Woody
	37	Food Waste – Unpackaged	38	Food Waste – Packaged
	39	Bottom Fines & Dirt	40	Diapers & Sanitary Products
	41	Other Compostable		
7 **Textiles**	42	Carpet	43	Carpet Padding
	44	Clothing	45	Other Textiles
8 **Inorganics**	46	Rubber Products	47	Syringes/Needles
	48	Medical & Infectious Waste	49	Television
	50	Computer Monitors	51	Computer Equipment/Peripherals
	52	Electronic Equipment/Peripherals	53	White Goods – Refrigerated
	54	White Goods – Not Refrigerated	55	Lead-Acid Batteries
	56	Other Household Batteries	57	Items Containing Lithium Batteries
	58	Lithium Batteries	59	Tires
	60	Household Bulk Items	61	Fluorescent Lights/Ballasts
	62	Solar Panels		
9 **C&D Debris**	63	C&D Contained in the MSW Loads	64	Untreated Wood
	65	Treated Wood		
10 **Household Hazardous Waste**	66	Chemicals (Liquid or Solid)		
11 **Other Wastes**	67	Non-Distinct	68	Unclassifiable Fines

Exhibit 3 shows the overall MSW composition for the Village as a whole. Data is provided for each category as a percentage of the total. Due to rounding, aggregated data presented throughout this report may not equal 100%. The largest material categories represented in the overall waste stream are as follows:

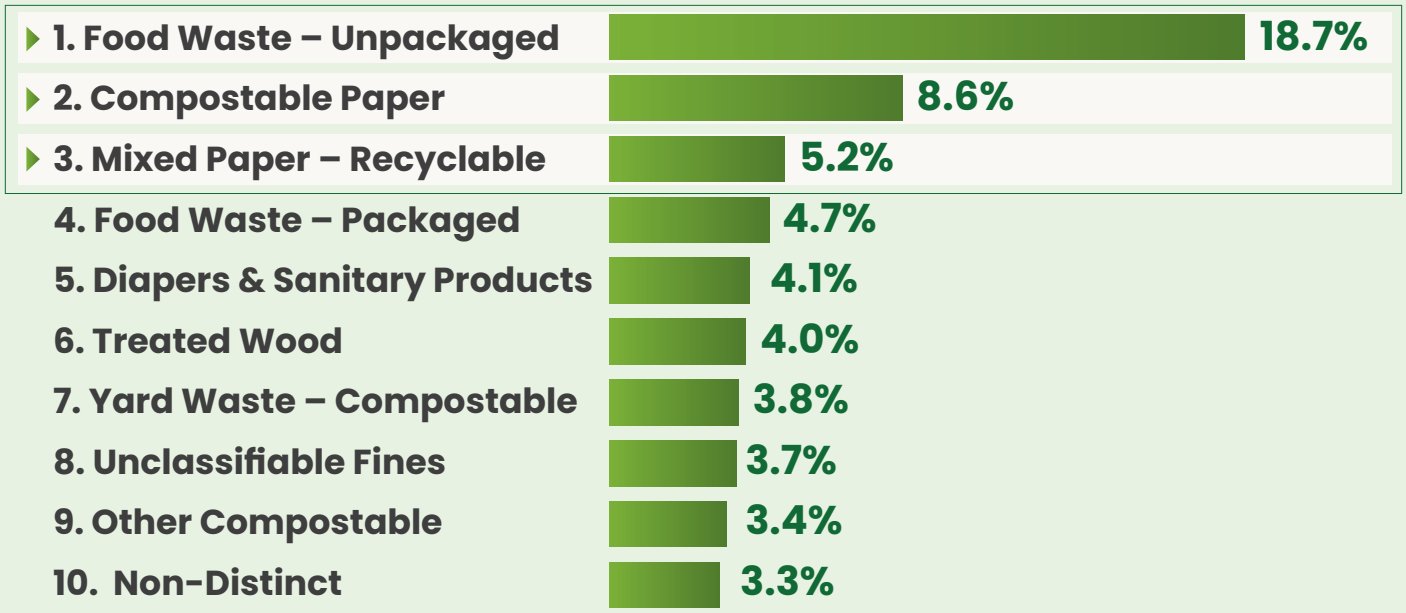
Exhibit 3 | Overall MSW Composition



Attachment D (MSW Material Composition – Detailed Overall) provides a detailed profile of the overall MSW composition that includes the percentage of all 68 material components. For each material component, the mean percent, standard deviation, and 90 percent confidence intervals are included. The sum of the individual material components for a particular category equals the percentage shown for that category.

Exhibit 4 highlights the top ten most prevalent MSW materials in the Village. These ten materials comprise 59.5 percent of the total MSW. The three materials with the largest percentages are Food Waste – Unpackaged (18.7 percent), Compostable Paper (8.6 percent), and Mixed Paper - Recyclable (5.2 percent).

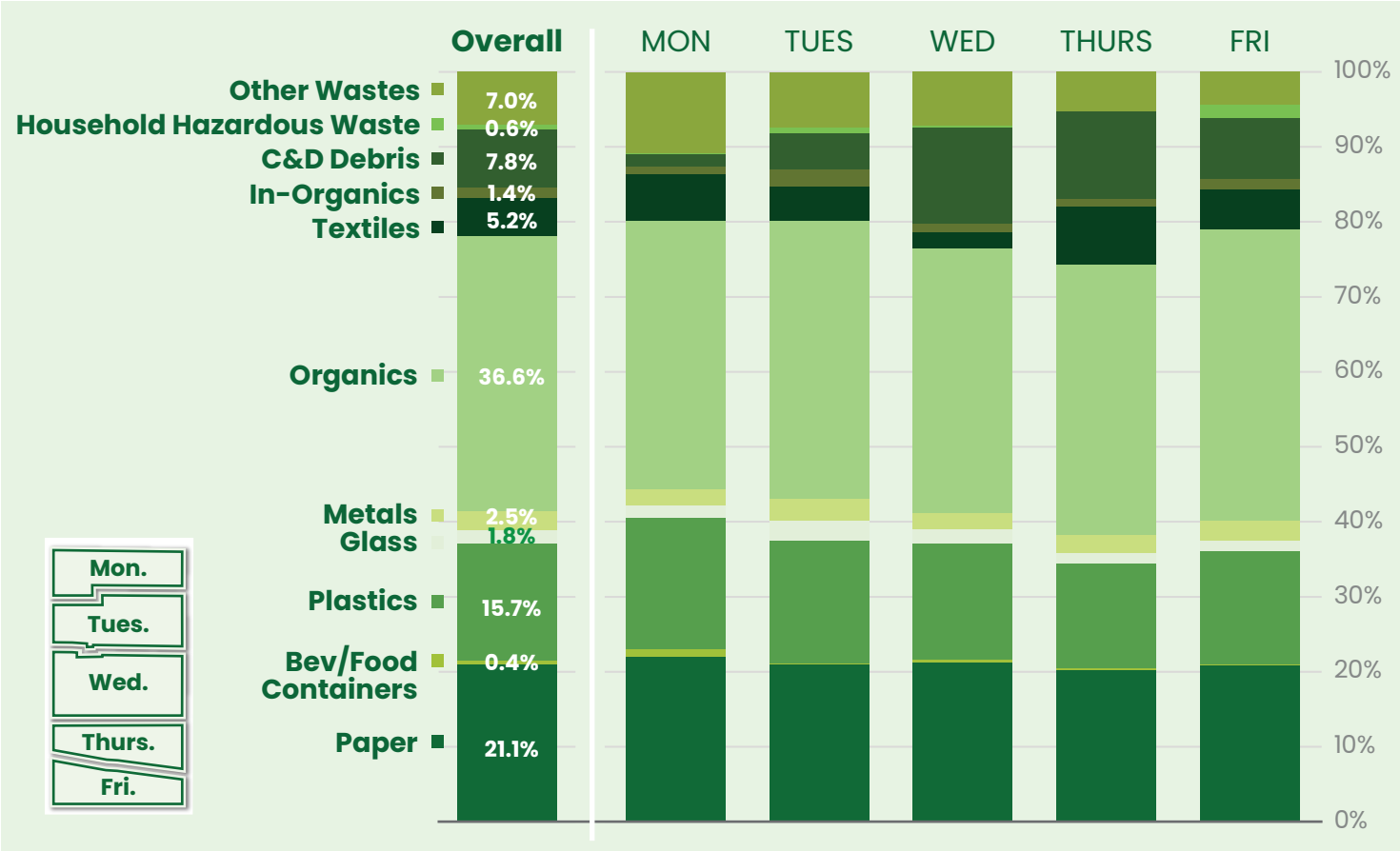
Exhibit 4 | **Top Ten Overall MSW Materials** (components)



7.1.2 MSW Route Composition Comparison

Exhibit 5 shows the comparison of the MSW Composition for the Village of Oak Park throughout the week. Attachment E provides a detailed profile of MSW from each day collection (Monday – Friday) that includes the percentages of all material components, top ten material components, and an exhibit presenting the percentages of each category.

Exhibit 5. **MSW Route Composition Comparison** (material categories)



Variations in the MSW composition were identified throughout the collection routes. The largest variation was identified in the percentage of C&D Debris and Textiles. More C&D Debris was collected in the Wednesday and Thursday routes. Fewer textiles were collected on Wednesday than any other collection day.

7.2 RECYCLING COMPOSITION

To collect representative samples of material from each zone, SCS staff coordinated with LRS

7.2.1 Overall Recycling Composition

Table 2 provides a list of the 6 material categories and the 42 components within those categories that comprise the overall Village recycling stream. Definitions can be found in **Attachment A.**

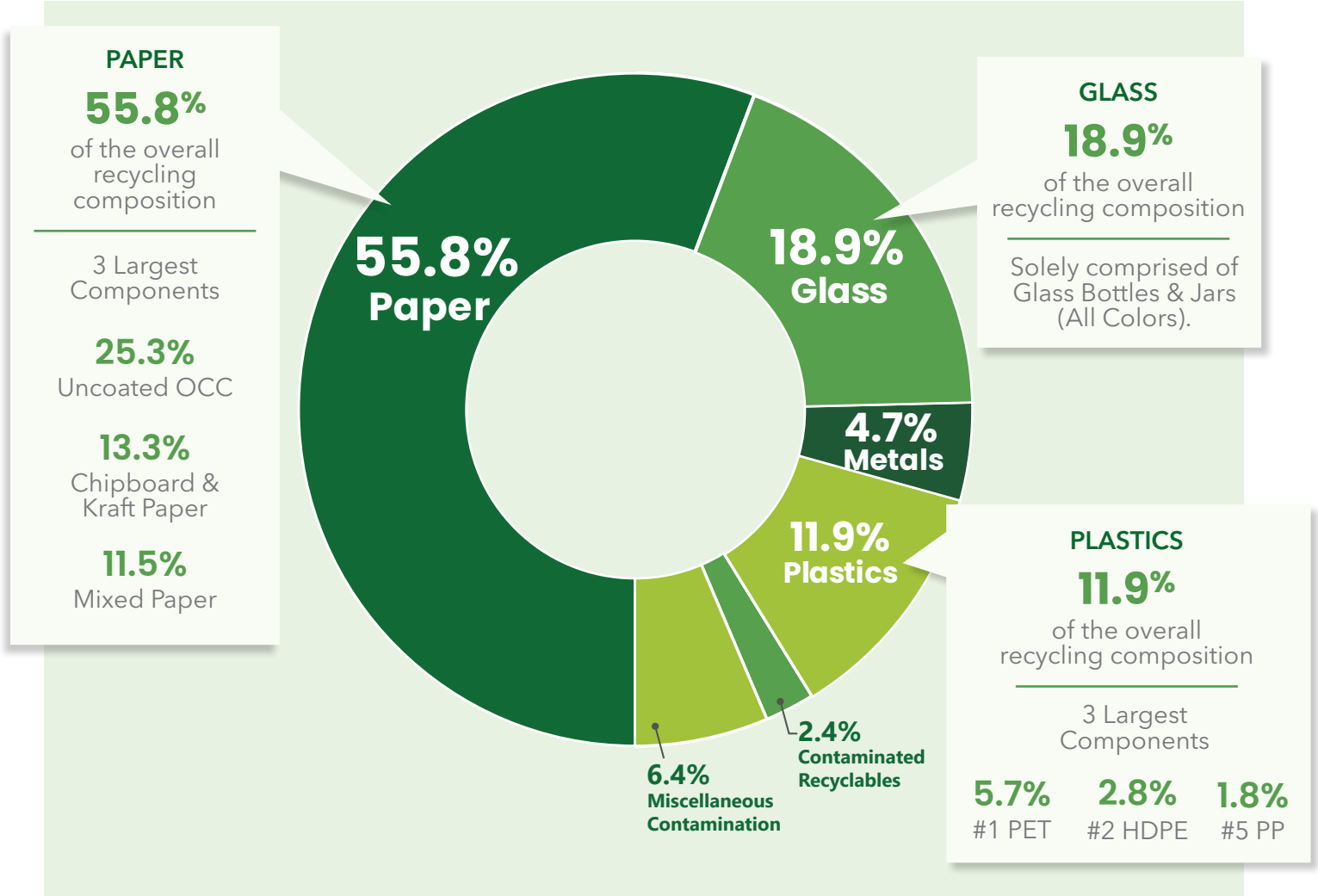
	Material **Categories**	Material **Components**
MSW	**11**	**68**
Recycling	**6**	**42**
Organics	**5**	**24**

Table 2 | Recycling Material Categories and Components

Material **Category**	No. Material **Component**			
1 **Paper**	1	Uncoated OCC (Old Corrugated Containers)	2	Chipboard & Kraft Paper
	3	Newspaper	4	Mixed Paper
	5	White Office Paper	37	Aseptic, Gable Top & Tetra Pak Containers (cartons)
2 **Plastics**	6	PET #1	7	HDPE #2
	8	#3 PVC	9	#4 LDPE
	10	#5 PP Containers	11	#7 Other
3 **Metals**	12	Aluminum Containers	13	Aluminum Foil & Formed Containers
	14	Steel/Tin Containers	15	Aerosol Can (Empty)
	16	Paint Cans (Empty)		
4 **Glass**	17	Glass Bottles & Jars (All Colors)		
5 **Contaminated Recyclables**	18	Contaminated Corrugated Cardboard	19	Other Contaminated Paper
	20	Contaminated #1 PET	21	Contaminated #2 HDPE
	22	Contaminated #5 PP	23	Other Contaminated Plastic
	24	Contaminated Metal Foil & Formed Containers	25	Other Contaminated Metals
			26	Contaminated Glass
6 **Miscellaneous Contamination**	27	Organic Waste	28	Plastic Bags & Film
	29	Polystyrene	30	Rope & String-Like Products
	31	Electronics	32	Hazardous Waste
	33	Propane Tanks	34	Manufactured Products
	35	Medical Waste	36	Aerosol Cans (Not Empty)
	38	Non-Recyclable Paper	39	Non-Recyclable Plastic
	40	Non-Recyclable Glass	41	Non-Recyclable Metal
	42	Refuse		

To collect representative samples of material from each zone, SCS staff coordinated with LRS. **Exhibit 6** shows the overall Recycling composition for the Village of Oak Park as a whole. Data is provided for each category as a percentage of the total. The largest material categories represented in the overall recycling stream are as follows:

Exhibit 6 | Overall Recycling Composition



- **Paper:** Paper contains an overall percentage of 55.8 percent of the overall recycling stream.
  - The material components of Uncoated OCC (25.3 percent), Chipboard & Kraft Paper (13.3 percent), and Mixed Paper (11.5 percent) have the highest percentages in this material category, together accounting for over 50 percent.
- **Glass:** This category constitutes 18.9 percent of the overall recycling composition.
  - This is solely comprised of Glass Bottles & Jars (All Colors).
- **Plastics:** The overall percentage of the Plastics material category is 11.9 percent.
  - The top contributor is #1 PET (5.7 percent). Other plastics found during sorts include #2 HDPE (2.8 percent), #5 PP (1.8 percent), and #7 Other (1.5 percent).

Attachment D (Recycling Material Composition – Detailed Overall) provides a detailed profile of the overall Recycling composition that includes the percentage of all 42 material components. For each material component, the mean percent, standard deviation, and 90 percent confidence intervals are included. The sum of the individual material components for a particular category equals the percentage shown for that category.

Exhibit 7 highlights the top ten most prevalent Recycling materials in the Village. These ten materials comprise 87.2 percent of the total Recycling materials. Four materials have percentages higher than 10 percent:

Exhibit 7 | Top Ten Overall Recycling Materials

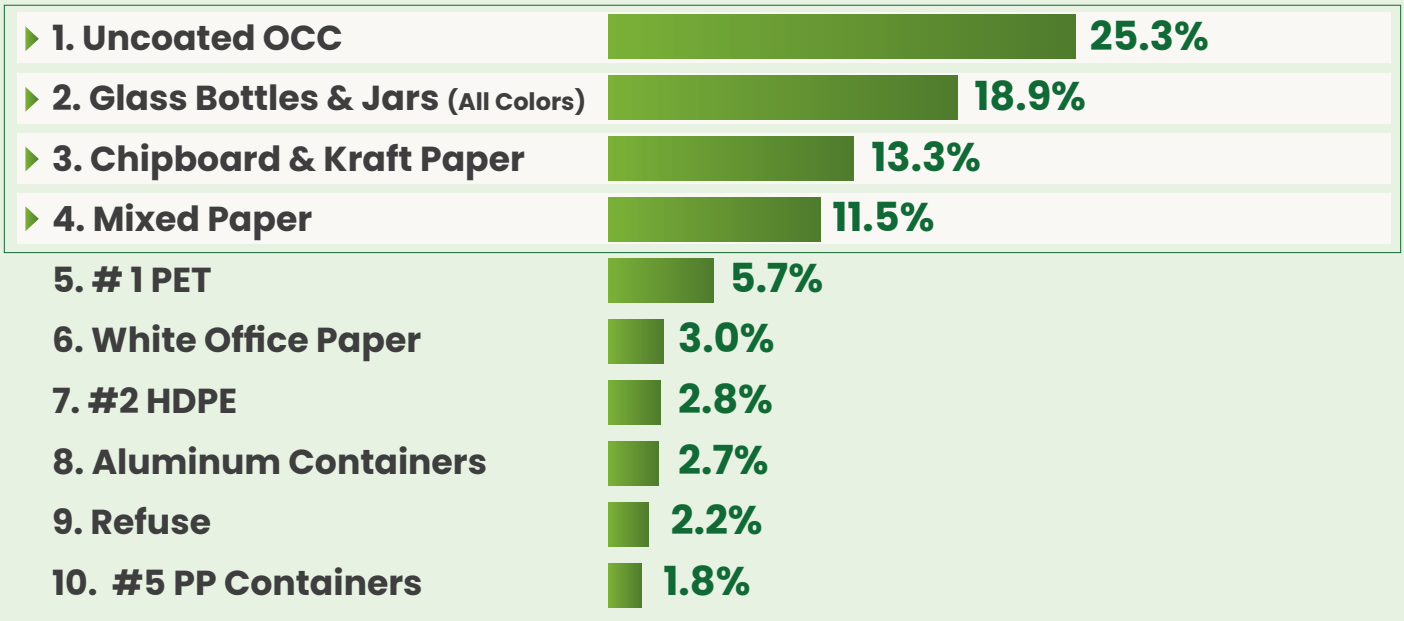
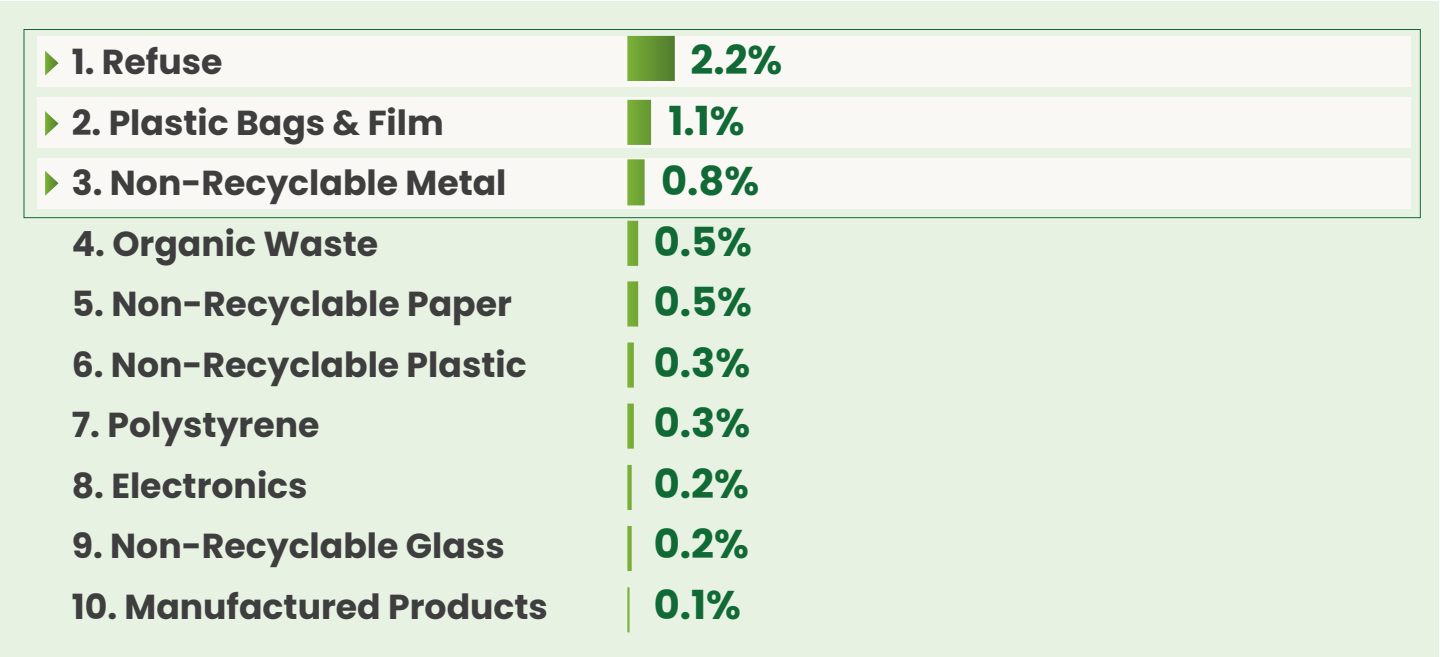


Exhibit 8 highlights the top ten most prevalent contaminants in the Village recycling that are not considered to be contaminated recyclables. These ten materials comprise 6.2 percent of the total materials received as recycling. The three materials with the largest percentages are:

Exhibit 8 | **Top Ten Overall Recycling Contaminants**
(not considered to be contaminated recyclables.)

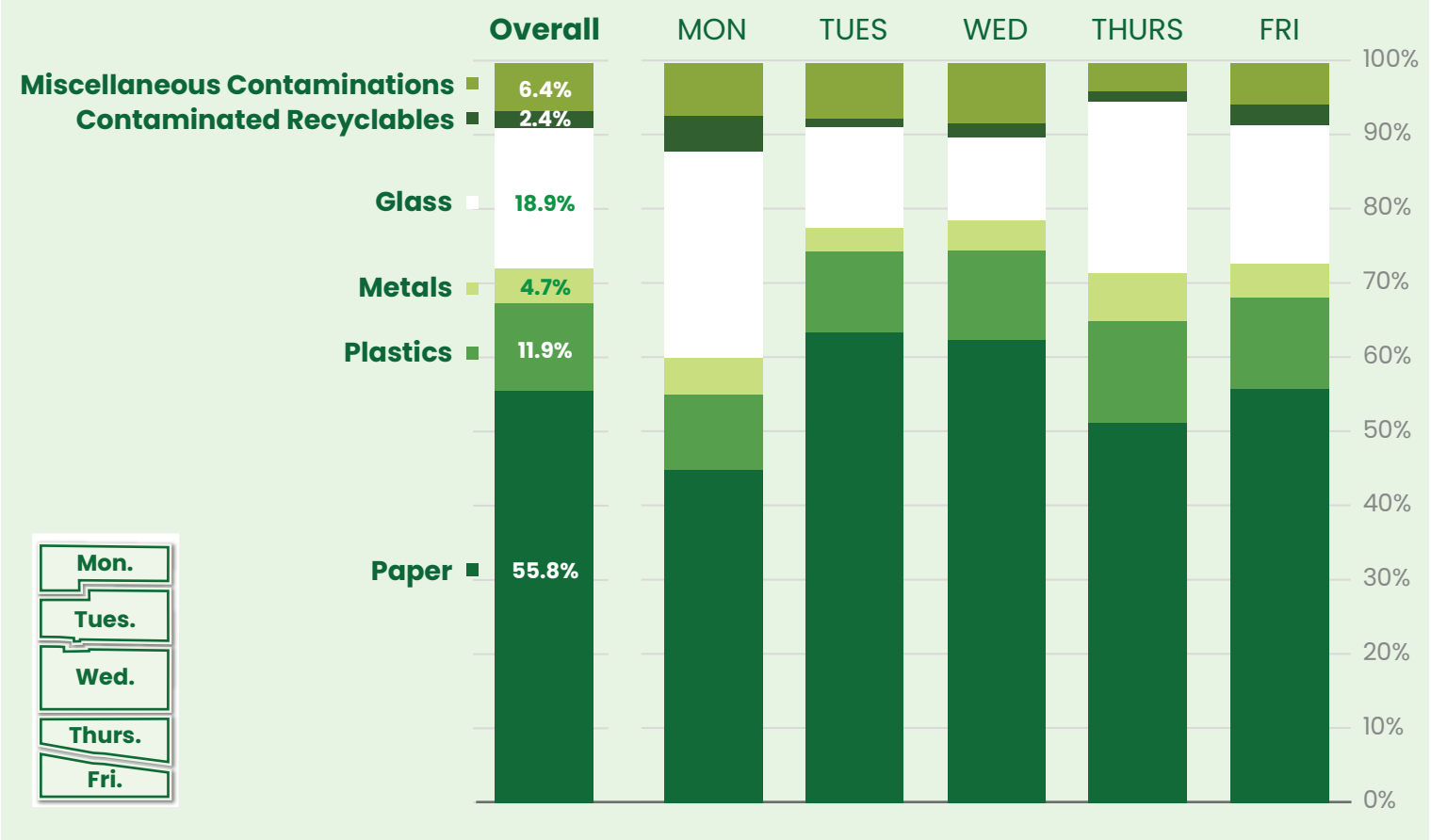


Approximately 90% of recycled materials align with Village guidelines, with only 8.8% contamination—mainly from refuse, plastic bags, films, and non-recyclable metals—indicating residents are largely aware of correct recycling practices.

7.2.2 Recycling Route Composition Comparison

Exhibit 9 shows the comparison of the Recycling Composition for the Village of Oak Park throughout the week. Attachment E provides a detailed profile of Recycling from each day collection (Monday – Friday) that includes the percentages of all material components, top ten material components and contamination, and an exhibit presenting the percentages of each category.

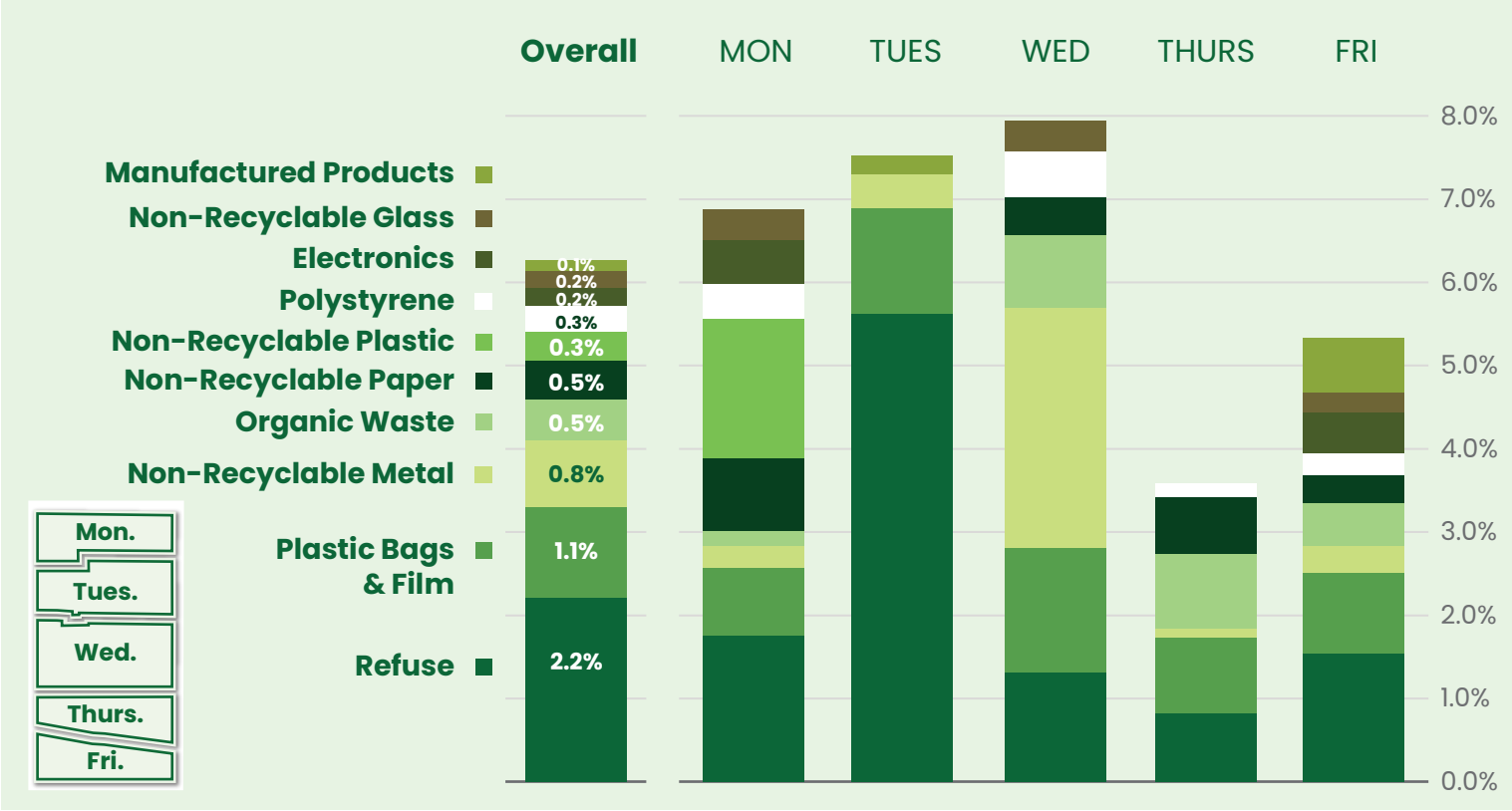
Exhibit 9. **Recycling Composition Route Comparison** (material categories)



Variations in the recycling composition were identified throughout the collection routes. The largest variation was identified in the percentage of Paper and Glass. More paper was collected in the Wednesday and Thursday routes while less Glass was collected on those days.

Exhibit 10 shows the comparison of the Recycling contamination for the Village of Oak Park throughout the week.

Exhibit 10. Recycling Contamination Route Comparison



Variations in the types of contamination found in the recycling stream were identified. The most prevalent contamination was Refuse, with a large percentage of non-recyclable metal collected on Wednesday. The overall contamination percentage was highest on Wednesday, with lower contamination percentages observed on Thursday and Friday. This may indicate that education materials may be more beneficial to the Monday - Wednesday collection zones compared to the Thursday and Friday zones.

7.3 ORGANICS CONTAMINATION

This section displays the overall contamination and composition results for the 10 Organics samples.

7.3.1 Overall Organics Contamination

Table 3 provides a list of the 5 material categories and the 24 components within those categories that comprise the Village of Oak Park's potential organics contaminants stream. Definitions can be found in **Attachment A.**

	Material **Categories**	Material **Components**
MSW	**11**	**68**
Recycling	**6**	**42**
Organics	**5**	**24**

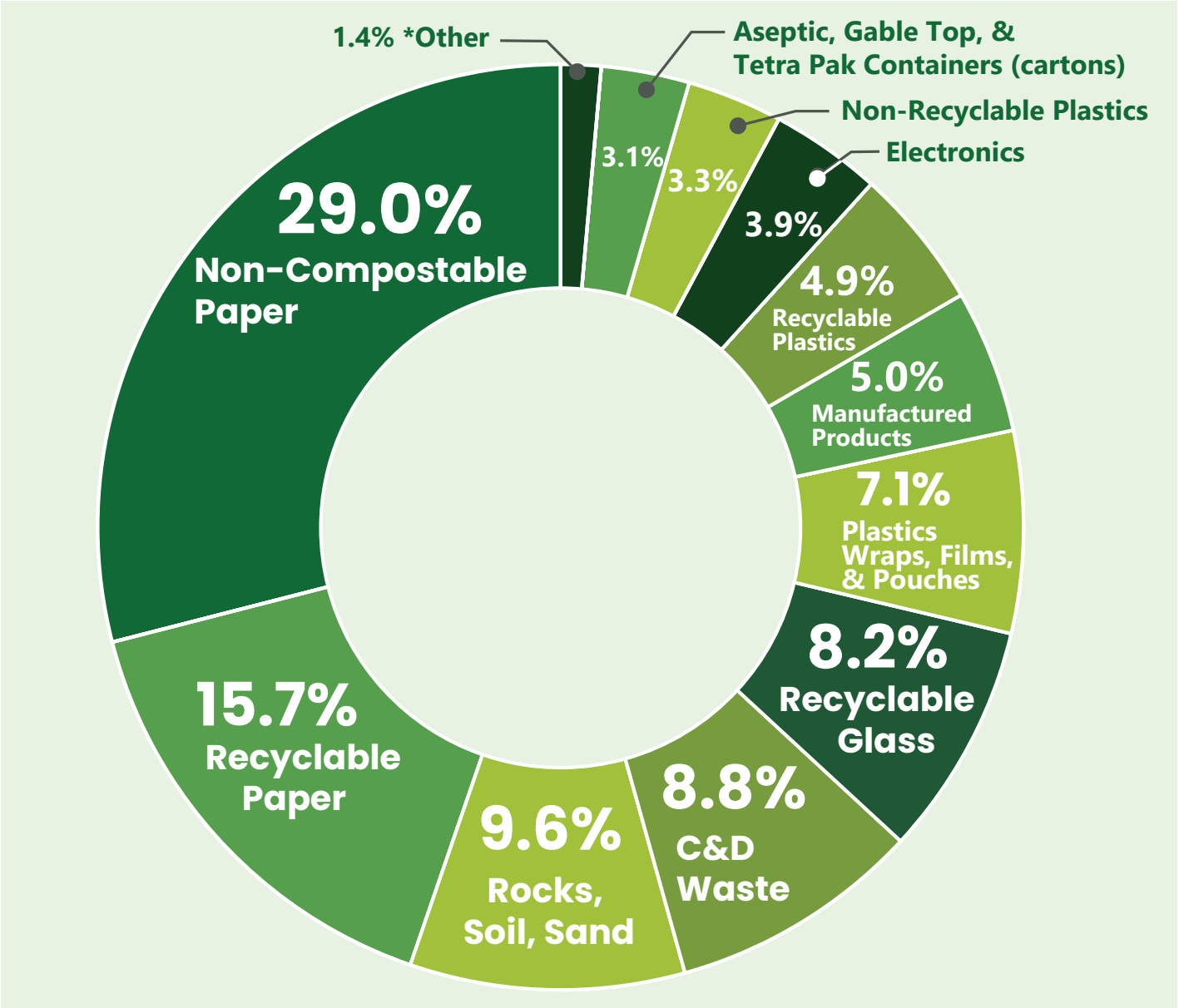
Table 3 | **Organics Contamination Material Categories and Components**

Material **Category**	No. Material **Component**			
1 **Paper**	1	Aseptic, Gable Top & Tetra Pak Containers (cartons)	2	Non-Compostable Paper
	3	Recyclable Paper		
2 **Plastics**	4	Plastics that do not meet ASTM	5	Plastics Wrap, Films, & Pouches
	6	Garbage Bags	7	Polystyrene
	8	Non-Recyclable Plastics	9	Recyclable Plastics
3 **Metals**	10	Non-Recyclable Metals	11	Recyclable Metals
4 **Glass**	12	Non-Recyclable Glass	13	Recyclable Glass
5 **Miscellaneous Contamination**	14	Animal Waste	15	Diapers & Sanitary Products
	16	Woody Materials	17	Rocks, Soil, Sand
	18	Electronics	19	Hazardous Waste
	20	Medical Waste	21	Manufactured Products
	22	Refuse & Non-Distinct	23	Unclassifiable Fines
	24	C&D Waste		

Exhibit 11 shows the overall composition of the Village of Oak Park's Potential Organic Contaminants. Data is provided for each category as a percentage of the total. The largest material categories represented in the overall recycling stream are as follows:

- **Miscellaneous Contamination:** This contamination category consisted primarily of Non-Compostable Paper (29.0%), followed by Rocks, Soil, and Sand not suitable for a commercial compost facility (9.6%), and C&D Waste (8.8%). The remainder of the contamination consisted of recyclables and packaging materials.
- **Paper:** The overall percentage of the Paper contamination category is 44.7%. The top contributors are Non-Compostable Paper (129.0%) and Recyclable Paper (15.7%).

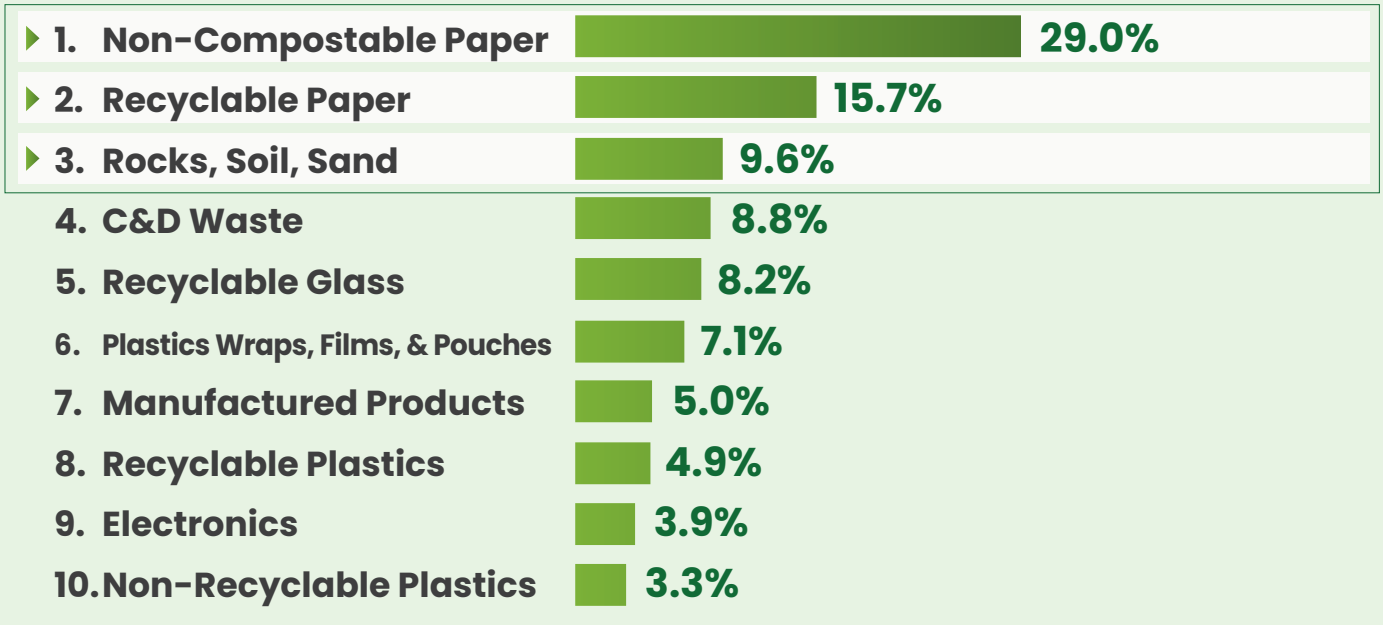
Exhibit 11 | **Overall Organics Materials Contamination** (Greater than 1 percent)



*Other less than 1% includes: Garbage Bags, Plastic that do not meet ASTM, Recyclable Metals, Refuse & Non-Distinct and Unclassified Fines.

Attachment D (Organics Potential Contaminant Material Composition – Detailed Overall) provides a detailed profile of the overall Organics potential contamination composition that includes the percentage of all 24 material components. For each material component, the mean percent, standard deviation, and 90 percent confidence intervals are included. The sum of the individual material components for a particular category equals the percentage shown for that category.

Exhibit 12 | **Top 10 Organics Contamination – Overall**



7.3.2 Organics Route Composition Comparison

Exhibit 14 shows the comparison of the Organics Contamination for the Village of Oak Park throughout the week. **Attachment E** provides a detailed profile of Organics contamination from each day collection (Monday – Friday) that includes the percentages of all contamination, top ten contamination, and an exhibit presenting the percentages of each contamination.

Exhibit 13 | **Organics Contamination Percentage - Route Comparison**

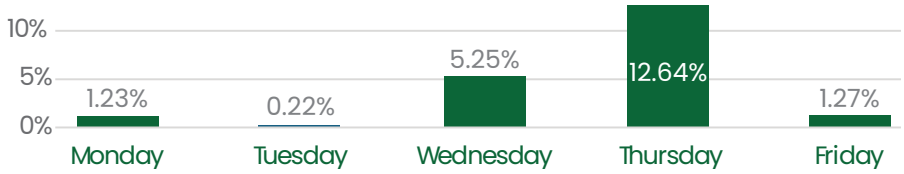
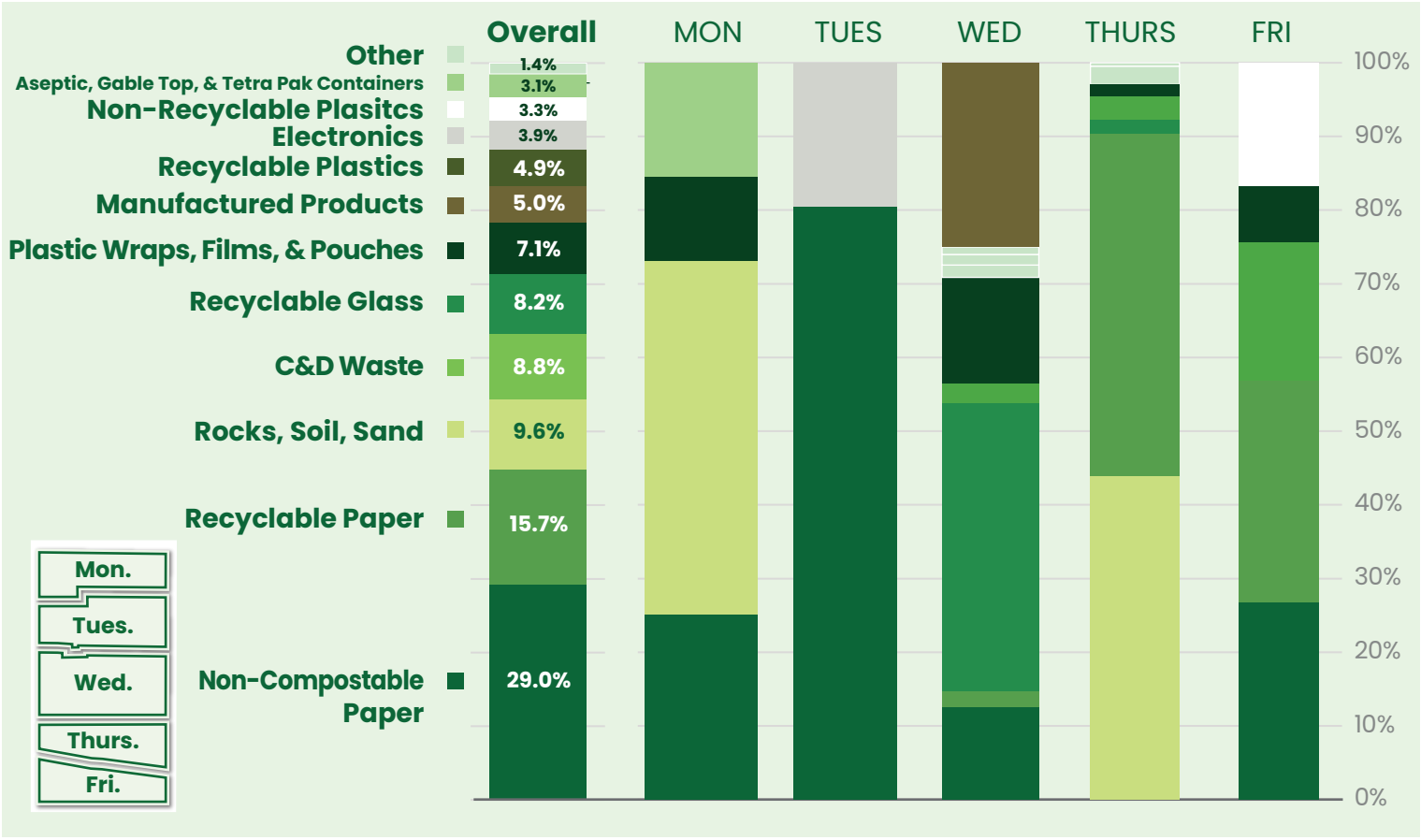


Exhibit 14 | **Organics Contamination Route Comparison**



*Other less than 1% includes: Garbage Bags, Plastic that do not meet ASTM, Recyclable Metals, Refuse & Non-Distinct and Unclassified Fines.

A high level of variability was found in the organics contamination profile across the collection zones. Monday was primarily contaminated with rocks, soils, and sand followed by some non-compostable paper. Tuesday only consisted of non-compostable paper and electronics in the form of a battery-powered landscape light. Wednesday had a large percentage of recyclable glass. Thursday consisted primarily of C&D Waste and recyclable paper. Friday consisted of non-compostable paper as well as recyclable plastics.

8 COMMUNITY SURVEY AND FEEDBACK

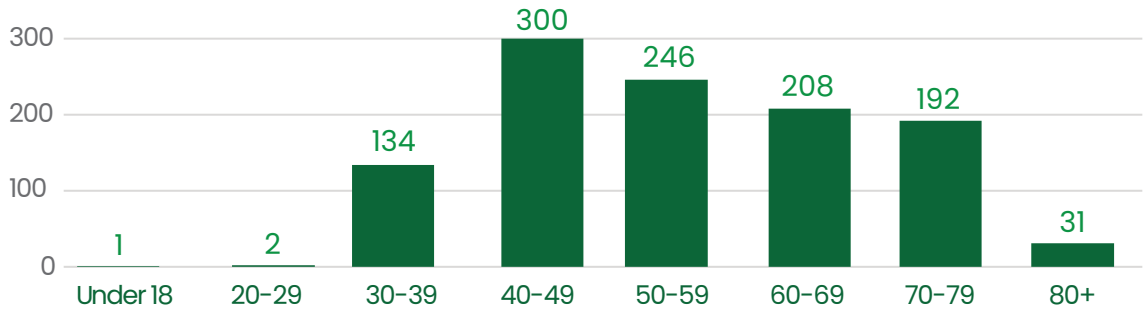
Working with the Village, a community survey was distributed to local residents to gather insights on residents' waste management practices, identify obstacles to recycling and composting, and gauge overall satisfaction with current services. By collecting insights on household waste generation, recycling and composting behaviors, and perceived barriers, the survey aimed to inform the Village's approach to enhancing existing programs and developing new strategies for reducing and diverting residential waste.

The survey was distributed through the EngageOakPark system and offered a $10 credit toward refuse fees for residence serviced by LRS. The specific questions included in the survey were reviewed by the Village, SCS, and the Village's Environment & Energy Commission.

The survey consisted of 15 total questions including information to confirm the $10 credit, age range, and whether the respondents owned or rented their residence. The survey received at least 1,117 responses to all questions related to waste generation, barriers to recycling, and engagement with the CompostAble program. A survey response report is provided in **Attachment E**.

The survey was able to reach a broad age range of residence, spanning a variety of generations that have experienced different waste management, recycling, and organics management practices.

Exhibit 15 | **Age Demographic of Respondents**



A summary of the results is provided below:

- **Waste Generation:** Most households (80%) dispose of 1–4 bags of garbage per week.
- **Recycling Habits:** Nearly all respondents (99%) regularly separate recyclables from trash. The most commonly recycled items are paper/cardboard (97%), plastics (87%), glass (81%), and metals (78%).
- **Barriers to Recycling:** Confusion about recyclable materials is the top barrier. Other issues include skepticism about the recycling industry, small bin sizes, effort required to clean recyclables, and limited curbside recycling for items like styrofoam (polystyrene) and electronics.
- **Challenging Waste Types:** Proper disposal is most difficult for hazardous household waste (68%), electronics (60%), and styrofoam (polystyrene) (47%). Other challenges include disposing of medical waste, textiles, and construction debris.
- **Composting Practices:** 63% of respondents compost in some way (using municipal programs or backyard piles), while 37% do not compost. Fruit/vegetable scraps and yard waste are most frequently composted.
- **Barriers to Composting:** Concerns include attracting pests, odor, cost, and uncertainty about what can be composted.
- **Satisfaction with Services:** 89% are satisfied or feel "neutral" with current solid waste collection services.
- **Environmental Concerns:** A large majority (92%) are concerned about the environmental impact of solid waste.
- **Information Sources:** Most people (75%) rely on the Village website and publications for information, with fewer using news media, environmental groups, or social media.
- **Encouraging Participation:** Financial incentives (73%) and education campaigns (50%) are seen as the best ways to boost engagement in waste reduction and recycling. Community events and stricter regulations also have support.
- **Outlook:** 82% of respondents are optimistic about the future of solid waste management in the community.

The findings help prioritize educational efforts, financial incentives, and service improvements to better align with community values, address environmental concerns, and foster greater participation and optimism regarding solid waste management in the community.

Overall, the survey reveals strong community engagement in recycling and composting, with most residents actively separating recyclables and participating in composting efforts. Despite this, challenges persist, including confusion about recyclable materials, limited curbside options, and concerns about composting (pests, odors, and cost). The community shows high environmental awareness and optimism about future improvements, relying mainly on Village communications for information. Financial incentives and educational initiatives are viewed as key strategies to increase participation and align waste management practices with community values.

9 NEXT STEPS FOR CONSIDERATION

Creating actionable next steps to achieve the waste diversion and reduction objectives in the Village's Climate Ready Oak Park plan is essential, especially considering the types of materials involved and the community's input.

The Village's material characterization study reveals that over 36% of materials headed to a landfill are organics, while more than 40% could be recycled or diverted through existing Village programs. Approximately 90% of recycled materials align with Village/LRS guidelines, with only 8.8% contamination—mainly from refuse, plastic bags, films, and non-recyclable metals—indicating residents are largely aware of correct recycling practices. Organic materials collected through the CompostAble program shows about 4% contamination, primarily from non-compostable paper, rocks, soils, sands, construction debris, and some recyclable packaging, further demonstrating generally high community awareness regarding proper waste separation.

Based on this composition and the feedback received from residents, the following next steps can be further evaluated with the Village to assess viability and order of priority:

Establish a Village Solid Waste Management Plan

The purpose of a Solid Waste Management Plan is to assess existing management practices, establish specific diversion targets, and integrate measurement milestones to track progress. This plan would provide a Village-specific perspective compared to the current Cook County Solid Waste Management Plan.

Prepare a Diversion Program Strategic Plan

Developing conceptual diversion program strategies involves outlining potential initiatives to increase waste diversion, while estimating their impacts, costs, revenues, and environmental effects. These strategies can assist the Village in evaluating and selecting specific programs that align with established CROP initiative goals. By providing a clear analysis of projected outcomes and associated expenses, the Village can make informed decisions about which diversion programs are most likely to deliver the desired environmental and operational benefits.

Build on the CompostAble Program

Encourage Neighborhood Participation. Work with neighborhood associations or block group to increase CompostAble program participation. The Village could provide financial incentives for areas with high sign-up rates or participants that have been consistently engaged in the program for multiple years. Organize friendly competitions between neighborhoods or streets to encourage sign-ups and reward collective efforts. Utilizing best

practices tools from resources like the Illinois Food Scrap and Compost Coalition (IFSCC) and the Institute for Local Self-Reliance (ILSR) can help educate the community about pest and odor management.

Increase Access and Convenience. Take advantage of existing or new drop-off locations for compostable materials. As more sites become available, established partnership or volunteer groups to help keep them well-managed in alignment with posted guidelines. Provide incentives to volunteers that help monitor drop-off locations.

Promote CompostAble Education in Schools and Homes. Access and share CompostAble program information through District 97 to spark family conversations about composting and waste reduction. As an institutional partner, the Village has helped encourage a connection between LRS and 9 local schools to established composting programs.

Enhance and Focus Education/Outreach Campaigns

Given that confusion about recyclable materials is a major barrier, the Village and LRS could expand educational campaigns to clarify recycling guidelines. The characterization study and survey can be further evaluated for trends along collection routes to focus education and outreach campaigns. Since most residents rely on Village sources for information, ensure these channels provide up-to-date, clear, and actionable guidance on all aspects of waste management. Consider adding interactive features or FAQs to the Village website for quick answers to common questions.

Some examples include:

- **Clarify that 20 - 30% of food residue is acceptable on recyclables for curbside collection.**
- **Explain that cardboard boxes placed beside recycle carts are accepted at the curb.**
- **Promote scheduled pick-ups for electronics, textiles, and bulky items.**
- **Expand events for collecting electronics, Styrofoam, and plastic bags/films.**

Increase Community Education Events

Organize events to provide community education related to existing food rescue networks, discuss large-event volunteer opportunities to make sure recycling and composting stations are used properly, encourage reuse/repair clinics to support reuse and empower people with more knowledge and additional skills. The purpose of these events is to demonstrate and highlight opportunities for residents to engage in waste diversion beyond their contribution to curbside collection.

Increase Financial Incentives

With financial incentives identified as a strong motivator (73%), the Village could offer additional credits, rebates, or reduced fees for households that demonstrate consistent recycling and composting participation. Providing rebates for participation in educational workshops on waste reduction may also help motivate participation.

Conducting an Rate Study of MSW collection and disposal services may allow for additional incentive opportunities to the CompostAble and other diversion programs within the Village.

Analyze Commercial (ICI) Waste and Recyclables

The Village can enhance commercial waste diversion by surveying businesses, auditing their waste practices, and promoting green certification, ordinance revisions, and sustainable initiatives such as reusable containers. Maintain and expand existing regulations and ordinances to support environmental goals.

Multi-Family Material Characterization Study

Conduct a material characterization study to understand the composition and potential opportunities for diversion of materials generated from multi-family residences throughout the Village. Multi-family units comprise of approximately 35% of the residence and provide additional opportunities to increase diversion and participation in existing programs.

10 CONCLUSION

The Village of Oak Park is leading the way in providing collection opportunities and options to manage MSW, recycling, and organics throughout the community. The Village continues to maintain a higher level of diversion and recycling rates compared to National and Cook County averages. The Village has provided residents the tools and access to effectively recycle as demonstrated by recycling contamination rate at 8.8%. Building on the Village's engagement and current systems is important to take the next step in achieving the goals of the CROP.

There are multiple pathways to continue this success and it requires collaboration and coordination to continue to progress. The Village can significantly advance its waste diversion and reduction goals through implementing these next steps. Leveraging community input and the waste characterization study, the next steps not only address current challenges but also build on existing strengths, fostering a more sustainable and engaged community committed to responsible waste management. This forward-thinking approach positions the Village not only as a leader in sustainability but also as a model for other communities striving to enhance their environmental impact.

11 SUPPORTING DOCUMENTS

Attachment A	MSW, Recycling, and Organics Categories/Components
Attachment B	Sampling Plan
Attachment C	Overall Material Composition Tables
Attachment D	Route Specific Material Composition Tables & Exhibits
Attachment E	Community Survey and Feedback

Attachment **A**

MSW, Recycling, and Organics Categories/ Components

MSW Characterization Groups and Categories Descriptions

Material Category	Material Component	Definitions
PAPER	Newspaper	Includes newspaper and all items made from newsprint, such as free advertising guides, election guides, plain news packing paper, stapled college schedules of classes, and tax instruction booklets.
	High Grade Office Paper	Includes white and pastel bond, rag, or stationary grade paper, with or without ink. Examples include photocopy, laser print, letter paper, computer paper used for computer printouts, and notebook or ledger paper.
	Magazines/Catalogs	Includes magazines and catalogs and other items made of glossy coated paper. This paper is usually slick, smooth to the touch, and reflects light. Does not include phone books.
	Uncoated OCC/Kraft	Includes uncoated cardboard items with a wavy core, without wax coating on the inside or outside. Examples include shipping and moving boxes, computer packaging cartons, sheets and pieces of boxes and cartons, Kraft paper bags, and other Kraft paper. Does not include chipboard.
	Boxboard	Includes chipboard not coated with wax, metal, or plastic. Also includes paperboard such as cereal and tissue boxes.
	Mixed Paper - Recyclable	Includes all other recyclable papers not elsewhere described. Includes phone books and directories, junk mail, envelopes, brightly colored ledger paper and other dry paper, manila folders, index cards, carbonless forms, and egg cartons. Mixed Recyclable Paper may be combined with minor amounts of other material such as wax or glues.
	Compostable Paper	Includes low grade and food and/or moisture contaminated paper which is compostable. Examples include paper towels, paper plates, waxed papers, and tissues.
	Other Paper	Includes items made mostly of paper but combined with large amounts of other materials such as wax, plastic, glues, foil, and wire. Examples include blueprints, sepia, onion skin, foiled lined fast food wrappers, carbon paper, coated OCC, and photographs.
BEVERAGE/ FOOD CONTAINERS	Milk & Juice Cartons/Boxes - Coated	Includes aseptic packages and poly coated (gable top) cartons.

Material Category	Material Component	Definitions
PLASTICS	#1 PET Bottles/Jars	Includes clear or colored PET bottles (i.e., narrow neck containers) and jars marked with a #1. May also bear the letters "PETE" or "PET." The color is usually transparent green or clear and does not turn white when bent. Examples include soft drink bottles, some liquor bottles, and cooking oil containers.
	#1 Other PET Containers and Packaging	Includes PET containers and packaging marked with a #1 and potentially bearing the letters "PETE" or "PET."
	#2 HDPE Bottles/Jars - Clear	Includes bottles (i.e., narrow neck containers) and jars marked with #2 that are cloudy white, allowing light to pass through it (natural) Examples include milk jugs, water jugs, some hair-care bottles, and other clear empty fluid containers marked with #2 or "HDPE."
	#2 HDPE Bottles/Jars - Color	Includes bottles (i.e., narrow neck containers) and jars marked with #2 that are a solid color, preventing light from passing through it (pigmented). Examples include detergent bottles, some hair-care bottles, empty motor oil, empty antifreeze, and other empty vehicle and equipment fluid containers marked with #2 or "HDPE."
	#2 Other HDPE Containers and Packaging	Includes HDPE containers and packaging marked with a #2 and potentially bearing the letters "HDPE."
	#5 PP Containers	Includes PP containers and packaging marked with a #5 and potentially bearing the letters "PP": Examples include yogurt tubs, take out containers, etc.
	#5 Other PP	Packaging bearing the number “5” in the triangular recycling symbol and may also bear the letters “PP” that is packaging (i.e., non-container).
	#6 Expanded Polystyrene Packaging	Includes formed or sheet expanded polystyrene (EPS) items marked with a PS or a #6, used for packaging and shipping. Examples include items used for food packaging or food service, food trays, egg cartons, packaging peanuts, packaging blocks, and coolers.
	#3, #4, #6 (Non-Expanded), and #7 Other	Includes bottles, jars, and containers marked #3, #4, #6 (non-expanded) or #7.
	Other Rigid Plastic Products	Includes plastic items (excluding containers or plastic film that has the type of plastic marked on the material). Examples include plastic outdoor furniture, plastic toys and sporting goods, CDs, and plastic house wares, such as mop buckets, dishes, cups, cutlery, fan blades, impact-resistant cases such as tool boxes and first aid boxes, and buckets.

Material Category	Material Component	Definitions
PLASTICS (continued)	Grocery & Merchandise Bags	Includes labeled grocery and merchandise, dry cleaner, and newspaper polyethylene film bags that were not contaminated with food, liquid or grit during use.
	Trash Bags	Includes polyethylene film bags that were used to contain garbage such as black or transparent trash bags.
	Commercial & Industrial Film	Includes film plastic used for large-scale packaging or transport packaging, such as industrial film, wrappings, plastic strapping, other thin flexible plastic packaging, plastic sheeting, and shrink wrap.
	Other Film	Includes film packaging not defined above, such as film that is woven together (e.g., grain bags); contains multiple layers of film or other materials that have been fused together (e.g., potato chip bags); is used to contain food or liquid (e.g., produce and bread bags); plastic sheeting; photographic negatives; shower curtains, and vinyl products.
	Other Plastic	Includes plastic items not elsewhere classified as well as items made mostly of plastic but combined with other materials. Examples include disposable razors, pens, lighters, 3-ring binders, auto parts made of plastic attached to metal, plastic outdoor furniture, and other objects that contain more than 50% plastic, etc.
GLASS	Recyclable Glass Bottles & Jars	Includes clear, green, brown, and other colored glass bottles and jars containing beverages, food, or consumable liquids. Examples include whole or broken clear or colored soda, beer bottles, fruit juice bottles, peanut butter jars, mayonnaise jars, wine bottles, cosmetic jars and non prescription medical bottles.
	Flat Glass	Includes clear or tinted glass that is flat, such as glass window panes, doors, table tops, flat automotive window glass (side windows), safety glass, and architectural glass. This category does not include windshields, laminated glass, or any curved glass.
	Other Glass	Includes glass that cannot be put in any other type or subtype. It includes items made mostly of glass but combined with other materials, such as Pyrex, crystal and other glass tableware, auto windshields, and incandescent light bulbs.
METAL	Aluminum Beverage Containers	Includes any food or beverage container made mainly of aluminum, such as aluminum soda or beer cans and some pet food cans. This does not include bimetal containers with steel sides and aluminum ends.
	Other Aluminum	Includes items such as aluminum foil, pie plates, trays, siding, and furniture.

Material Category	Material Component	Definitions
METAL (continued)	HVAC Ducting	Includes sheet metal tubing, typically galvanized, used for conveying ventilation air.
	Ferrous Containers (Tin Cans)	Includes rigid containers made mainly of steel, such as items that will stick to a magnet and may be tin-coated. This subtype is used to store food, beverages, paint, and a variety of other household and consumer products. Examples include canned food and beverage containers, empty metal paint cans, empty spray paint and other aerosol containers, and bimetal containers with steel sides and aluminum ends.
	Other Ferrous	Includes iron or steel that is magnetic or any stainless steel item, other than ferrous/bimetal cans. Examples include structural steel beams, boilers, metal clothes hangers, metal pipes, rebar, stainless steel cookware, security bars, scrap ferrous items, and galvanized items such as nails and flashing.
	Other Non-Ferrous	Includes any metal item, other than aluminum cans, that is not magnetic. These items may be made of copper, brass, aluminum, bronze, lead, zinc, or other metals. Examples include aluminum window frames, aluminum siding, copper wire, shell casings, brass pipe, and aluminum foil.
	Other Metal	Includes metal that cannot be put in any other category. This category includes items made mostly of metal but combined with other materials and items made of both ferrous metals and non-ferrous metal combined. Examples include small non-electronic appliances such as toasters and hair dryers, motors, insulated wire, and finished products that contain a mixture of metals or metals and other materials, whose weight is derived significantly from the metal portion of its construction.
ORGANICS	Yard Waste - Compostable	Includes leaves, grass clippings, garden debris, pruning, shrubs, and small branches up to 2 inches in diameter from any public or private landscapes.
	Yard Waste - Woody	Includes vegetative woody plant material, branches, shrubs, and stumps that exceed 2 inches in diameter from any public or private landscape.

Material Category	Material Component	Definitions
ORGANICS (continued)	Food Waste - Unpackaged	Includes food material capable of being composted (including scrap animal parts). This type includes materials resulting from the processing, storage, preparation, cooking, handling or consumption of food and material from industrial, commercial or residential sources. Examples include discarded meat scraps, dairy products, egg shells, fruit or vegetable peels, and other food items from homes, stores, and restaurants. This type includes grape pomace and other processed residues or material from canneries, wineries, or other industrial sources. Food material resulting from the processing, storage, preparation, cooking, handling, or consumption of food; includes material from industrial, commercial, or residential sources; examples include discarded meat scraps, dairy products, eggshells, fruit or vegetable peels, vitamins/supplements, and other food items from homes, stores and restaurants. Includes food in packages if it has been opened or consumed in some capacity. Also includes anything spoiled, moldy, half-eaten, containing liquid, or otherwise makes it unfit for consumption
	Food Waste - Packaged	Food material still in the original packaging; includes material from industrial, commercial, or residential sources. Examples include unopened food packaging or food not processed or consumed. Example: sauce packets, candy, whole produce. Food which is fit for human consumption and meets criteria for suitability for rescue/donation, generally limited to large quantities of pre-consumer surplus food;
	Bottom Fines & Dirt	Includes organic fragments that would pass through 1/4 inch screen. Examples include sand, soil, clay, and dirt.
	Diapers and Sanitary Products	Diapers made from a combination of fibers, synthetic, and/or natural, and made for the purpose of single use. This includes disposable baby diapers, adult protective undergarments, pee pads, and sanitary products.
	Other Compostable	Includes organic material that cannot be put in any other category such as items made mostly of organic materials but combined with other materials. Examples include cork, hemp rope, cigarette butts, sawdust, animal feces, and dead animals.

Material Category	Material Component	Definitions
TEXTILES	Carpet	Includes material consisting mainly of carpet flooring applications and rugs consisting of various natural or synthetic fibers bonded to some type of backing material.
	Carpet Padding	Includes plastic, foam, felt, and other materials used under carpet to provide insulation and padding.
	Clothing	Includes items made of thread, yarn, fabric, cloth, clothes, natural and synthetic cloth fibers, and leather clothing goods.
	Other Textiles	Includes drapes, curtains, bedding, blanket, upholstery, shoes, and other products mostly of textiles and leather.
IN-ORGANICS	Rubber Products	Rubber and latex products and scrap materials such as bath mats, inner tubes, rubber hoses, and foam rubber pieces, not including inflatable mattresses (vinyl). Does not include tires (tires) or latex/rubber gloves (medical and infectious waste).
	Syringes/Needles	Needles, syringes, and diabetic testing lancets.
	Medical and Infectious Waste	any “red bag” material; Medical related items that may present an exposure or biohazard (i.e., bloody gowns, latex/rubber gloves, surgical equipment, medicine, plasma, etc.). Medicine includes items such as Tylenol, inhalers, and prescription/non-prescription items. This does not include vitamins or supplements.
	Televisions	Includes televisions.
	Computer Monitors	Includes computer monitors containing a cathode ray tube (CRT), including oscilloscopes. Does not include laptops and LCD monitors.
	Computer Equipment/Peripherals	Includes keyboards, printers, modems, etc.
	Electronic Equipment/Peripherals	Means large and small electronic goods that have circuitry. Examples include stereos, VCRs, DVD players, radios, audio/visual equipment, and non-CRT televisions (such as LCD televisions); computer related electronics such as processors, mixed, keyboards, laptops, disk drives, printers, modems, and fax machines; and other small consumer goods such as personal digital assistants (PDAs), cell phones, phone systems, phone answering machines, computer games and other electronic toys, portable CD players, camcorders, and digital cameras.

Material Category	Material Component	Definitions
IN-ORGANICS (continued)	White Goods - Refrigerated	Includes goods made mostly of metal but combined with other materials and items made of both ferrous and non-ferrous metals combined. Examples include large appliances such as refrigerators, freezers, and dehumidifiers.
	White Goods - Not Refrigerated	Includes items made of plastics and both ferrous and non-ferrous metals combined. Examples include large appliances and parts thereof such as stoves, washers, dryers, water heaters, and microwaves; as well as small appliances such as fans, irons, and hair dryers.
	Lead-Acid Batteries	Includes batteries with liquid acid and lead cells, such as car, truck, lawn mower, and other batteries used to store power.
	Other Household Batteries	Includes any type of dry cell battery, such as flashlight, small appliance, watch, and hearing aid batteries.
	Items Containing Lithium Batteries	Rechargeable plastic items or plastic items containing lithium batteries. Includes vaping devices, various plastic toys, or plastic instruments. Does not include electronics.
	Lithium Batteries	Lithium batteries separate from plastic or metal device
	Tires	Includes whole tires from automobiles, trucks, motorcycles, bicycles, wagons, and other transport vehicles.
	Household Bulk Items	Includes multi-material furniture items such as couches, chairs, hutches, tables, entertainment centers, fragments of furniture items, and mattresses (fabric coated framed or unframed wire coil bulky item used for sleeping).
	Fluorescent Lights/Ballasts	Includes a lamp tube that is able to be screwed or plugged in to a lamp or over head light that produces visible light by Fluorescent, especially a glass tube whose inner wall is coated with a material that fluoresces when an electrical current causes a vapor within the tube to discharge electrons. Includes fluorescent lights, ballasts, and compact fluorescent bulbs (CFL).
	Solar Panels	Photovoltaic device that is used to absorb the sun's rays and convert them into electricity or heat. Typically contains solar cells, glass, aluminum frame, and an electronic junction box.

Material Category	Material Component	Definitions
CONSTRUCTION & DEMOLITION	C&D contained in the MSW loads	Roof shingles, brick, rock/gravel, concrete, general C&D, gypsum board, and metal
	Untreated Wood	Refers to any wood which does not contain an adhesive, paint, stain, fire retardant, pesticide or preservative; includes such items as pallets, skids, spools, packaging materials, bulky wood waste or scraps from newly built wood products and wood pallets; does not include land clearing debris or yard waste pruning and trimmings
	Treated Wood	Wood that contains an adhesive, paint, stain, fire retardant, pesticide or preservative; includes all engineered wood.
HOUSEHOLD HAZARDOUS WASTE	Chemicals (Liquid or Solid)	Includes latex and other water-based paints and similar products, alkyd and enamel based paints, aerosol paints, and related products; Includes solvents, motor oil, degreasers, chlorinated, paint stripper, and any product where the primary ingredient is a solvent or alcohol; pesticides/fertilizers, cleaners, antifreeze, acids, and bases.
OTHER	Non-distinct	Miscellaneous materials not elsewhere identified, kitty litter, wax, soap, hair, full vacuum bags, etc.
	Unclassifiable Fines	Un-sortable small fragments (generally less than 1/2 inch in diameter); mainly composed of in-organic material and miscellaneous fines and dirt.

Recycling Characterization Groups and Categories Descriptions

Material Category	Material Component	Definitions
PAPER	Uncoated Corrugated Cardboard	Non-waxed shipping/moving boxes, 3-layers with waffle-like/wavy inner layer
	Chipboard & Kraft Paper	Non-corrugated, single layer cardboard. Containers such as cereal, spaghetti, cracker and shoe boxes.
	Newspaper	Anything printed on the type of paper generally used for newspapers, including advertising inserts printed on newspaper
	Mixed Paper	Magazines, catalogs, junk mail, index cards, manila envelopes, paperback books, telephone books, gift wrapping paper, etc.
	Aseptic, Gable Top, and Tetra Pak containers	Food or drink related containers made of layered paper and contain aluminum foil and/or plastic. Juice boxes, chicken/beef/veggie broth boxes, soup containers, wine containers.
	White Office Paper	White office and computer paper
PLASTIC	#1 PET	Plastic soft drink, water, and other containers marked with #1 or PET
	#2 HDPE	Milk or water jugs, detergent bottles, and other containers marked with #2 or HDPE
	#3 PVC	Narrow neck containers marked with #3 or PVC such as household cleaners, health and beauty products, etc.
	#4 LDPE	Margarine tubs and plastic rings from beverage cans; Does not include film
	#5 PP	Yogurt cups, narrow neck syrup and ketchup bottles, and other similar containers marked with #5 or PP
	#7 Other	Plastic resin grocery narrow neck containers
METALS	Aluminum Containers	Food and beverage cans made entirely of aluminum. Includes most soda and beer cans as well as aluminum pet food cans. Also includes clean aluminum foil and formed containers. (Does not include aluminum aerosol spray cans or bimetal cans.)
	Aluminum Foil and Formed Containers	Foil, pie plates, roasting/baking pans, storage and serving trays, some pet food, and similar materials
	Steel/Tin Containers	Food and beverage containers with steel sides. Includes detached tops if made of steel.
	Aerosol Cans (empty)	Empty pressurized steel/aluminum containers. Includes spray paint, hairspray, room deodorizers
	Paint Cans (empty)	Empty latex and oil paint containers

Material Category	Material Component	Definitions
GLASS	Glass Bottles & Jars (all colors)	Glass containers with and without any color or tint in the glass. Includes caps left on empty containers by the consumer.
CONTAMINATED RECYCLABLES	Contaminated Corrugated Cardboard	Recyclable materials containing more than 20% food, liquid, oil, or other substance making the material unacceptable for recycling
	Other Contaminated Paper	
	Contaminated #1 PET	
	Contaminated #2 HDPE	
	Contaminated #5 PP	
	Other Contaminated Plastic	
	Contaminated Metal Foil and Formed Containers	
	Other Contaminated Metals	
	Contaminated Glass	
MISCELLANEOUS CONTAMINATION	Organic Waste	Food, yard waste, animal waste
	Plastic Bags and Film	Product and packaging wrap, such as retail shopping bags, newspaper bags, food storage bags, and produce/bread bags
	Polystyrene	Styrofoam™ materials, packaging peanuts, food carryout containers, plates, bowls, beverage cups, utensils, straws, egg cartons, meat/poultry trays. etc.
	Rope and String-Like Products	Long and thin materials such as rope, string, twine, power cords, extension cords, garden hoses, Christmas lights, and similar materials
	Electronics	Manufactured or assembled devices powered by a battery source or a plug-in cord. Examples include computers, laptops, tablets, cellphones, toasters, hair dryers, power tools, fans, etc.
	Hazardous Waste	Chemical containers such as paint, cleaning products, pesticide products, etc. with chemicals still remaining in the container
	Propane Tanks	Pressurized, cylindrical, metal container designed to store liquefied propane gas. Not acceptable even if container is completely empty.

Material Category	Material Component	Definitions
MISCELLANEOUS CONTAMINATION (continued)	Manufactured Products	Toys, instruments, sporting goods such as balls, gloves, golf clubs and bag, mitts, cones, rackets, fishing rods, and sports shoes
	Medical Waste	PPE, bandages, syringes, etc.
	Aerosol Cans (not empty)	Pressurized steel/aluminum containers that are not empty. Includes spray paint, hairspray, room deodorizers
	Non-Recyclable Paper	Non-recyclable and non-compostable types of paper products such as carbon paper, hardcover books, and composite materials containing paper mixed with metal or plastic parts.
	Non-Recyclable Plastic	Plastic items not categorized as recyclable including toys, totes, Tupperware, baby pools, clothes hangers, cleaning tools, drinking straws, serving utensils, plastic cards, and plastic strapping
	Non-Recyclable Glass	Ceramics, drinking glasses, glass plates, cooking utensils, ash trays, decorative glass containers, vases, perfume bottles, or containers for cosmetic products
	Non-Recyclable Metal	Non-container metals such as precious metals (brass, copper, etc.), metal clothes hangers, sheet metal products, pipes, steel drums, stainless steel cookware, flashing, metal scraps, metal furniture, and metal mixed with another non-metal component.
	Refuse	Municipal solid waste that is not otherwise captured in other categories

Organics Characterization Groups and Categories Descriptions

Material Category	Material Component	Definitions
PAPER	Aseptic, gable top, and Tetra Pak containers	Food or drink related containers made of layered paper and contain aluminum foil and/or plastic. Dairy cartons, Juice boxes, chicken/beef/veggie broth boxes, soup containers, wine containers.
	Non-Compostable Paper	Paper material that is not compostable due to plastic or metal lining. May include additional products.
	Recyclable Paper	Paper material that is recyclable as defined by the Village's recycling program.
PLASTIC	Plastics that do not meet ASTM 6400 & 6868 compostable standards	Materials marked as compostable but not certified by ASTM standards
	Plastic Wraps, Film, Pouches	Plastic packaging, food storage bags, and serving ware such as plates, cups, and utensils.
	Garbage Bags	Retail shopping bags and garbage bags.
	Polystyrene	Styrofoam™ materials, packaging peanuts, food carryout containers, plates, bowls, beverage cups, utensils, straws, egg cartons, meat/poultry trays. etc.
	Non-Recyclable Plastics	Plastic material that is not recyclable as defined by the Village's recycling program.
	Recyclable Plastics	Plastic material that is recyclable as defined by the Village's recycling program.
METALS	Non-Recyclable Metals	Metal material that is not recyclable as defined by the Village's recycling program. Examples include contaminated containers and foils.
	Recyclable Metals	Metal material that is recyclable as defined by the Village's recycling program.
GLASS	Non-Recyclable Glass	Glass material that is not recyclable as defined by the Village's recycling program.
	Recyclable Glass	Glass material that is recyclable as defined by the Village's recycling program.
MISCELLANEOUS CONTAMINATION	Animal Waste	Feces from animals.
	Diapers & Sanitary Products	Plastic disposable diapers, pee pads, cloth diapers, and sanitary products
	Woody Materials	Tree stumps, trunks, roots or shrubs with intact root balls and clean branches.
	Rocks, Soil, Sand	Includes soil and clay, solid materials, and loose granular substances.

Material Category	Material Component	Definitions
MISCELLANEOUS CONTAMINATION (continued)	Electronics	Manufactured or assembled devices powered by a battery source or a plug-in cord. Examples include computers, laptops, tablets, cellphones, toasters, hair dryers, power tools, fans, etc.
	Hazardous Waste	Chemical containers such as paint, cleaning products, pesticide products, etc.
	Medical Waste	Materials used in medical settings and processes such as PPE, bandages, syringes, etc.
	Manufactured Products	Including toys, instruments, sporting goods such as balls, gloves, golf clubs and bags, mitts, cones, rackets, fishing rods, and sports shoes
	Refuse and Non-Distinct	Municipal solid waste and items that are not classified in other material categories. Includes items such as pet fur, hair, etc.
	Unclassifiable Fines	Un-sortable small fragments (generally less than 1/2 inch in diameter); mainly composed of organic material and miscellaneous fines and dirt.

Attachment **B**

Sampling Plan

Village of Oak Park
Material Characterization Study
Work Plan
LRS Maywood Facility

Village of Oak Park
123 Madison Street
Oak Park, Illinois 60302

SCS ENGINEERS

25225235.00 | August 25, 2025

40 Shuman Boulevard, Suite 216
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Tables

1 BACKGROUND

The Village of Oak Park (Village) is a home-rule municipal corporation located in the greater Chicago area. The Village currently performs Greenhouse Gas Inventories used in defining its climate action efforts. Currently, the Village has multiple waste diversion programs and initiatives to work towards expanded sustainability practices. This material characterization study will be the first performed in the Village. The characterization of residential materials will provide the Village with valuable data and information that may inform future planning and program efficiencies.

2 INTRODUCTION

The Village contracted with SCS Engineers (SCS) in July 2025 to conduct a Village of Oak Park Material Characterization Study (Study) at a centralized host facility. The facility selected to host the material characterization is Lakeshore Recycling Systems (LRS). This Study was designed with a sound methodology to be replicated for future comparison and tracking of material disposal trends. This Study provides meaningful data to help the Village make decisions in waste reduction, waste diversion, and environmental policy. This Study will help the Village measure their Greenhouse Gas Inventories and identify areas of improvement so the Village can continue its leadership in sustainability and waste diversion.

The overall objectives of the Study are as follows:

1. Collect material characterization data in a consistent, systematic, and repeatable manner from the residential generating sector of the Village that accurately represent the various material streams.
2. Analyze current residential waste management practices.
3. Conduct a stakeholder engagement event.
4. Provide a final opportunity assessment report.

This Study provides material composition data for the residential material generating sectors which is defined as single family and multi-family (four units and under) residential properties. The Study will characterize the following material streams:

- Municipal Solid Waste (MSW) – This encompasses waste collected for disposal from single family and multi-family (four units and under) residential properties.
- Recycling – This includes curbside recyclable materials including paper, plastic, glass, and metal collected for recycling from single family and multi-family (four units and under) residential properties.
- Organics – This includes material collected for composting as part of the Village's yard waste and CompostAble programs from single family and multi-family (four units and under) residential properties.

3 GENERATING SECTOR

The Study will characterize materials from the residential generating sector which is defined as single family and multi-family (four units and under) residential properties. To capture representative materials generated in the Village, SCS will be characterizing samples from each of the 5 zones depicted in Table 1.

4 SAMPLING PLAN

OVERALL SAMPLE SELECTION

Selecting the right samples is essential for safeguarding the integrity of the data. The load selection process consists of load stratification, driver interviews, and the visual inspection of the materials.

The stratification of the material loads is based on the neighborhood zones provided by the Village and may include route information provided by LRS. Table 1 below shows the zone serviced each day and the desired number of samples to obtain for each day of sorting by material type. An image to the right of the table displays the layout of the area for reference.

Table 1. Total Samples by Zone and Material Type

Zone	MSW Samples	Recycling Samples	Organics Samples
1 (Monday)	5	5	2
2 (Tuesday)	5	5	2
3 (Wednesday)	5	5	2
4 (Thursday)	5	5	2
5 (Friday)	5	5	2
TOTAL	**25**	**25**	**10**

SCS will coordinate with LRS staff to establish a load selection procedure that is based on the targeted routes of residential waste from each zone. LRS staff will coordinate with the SCS sampling manager to select identified loads to be obtained for sample collection. LRS staff will use a list of samples needed by zone provided by the SCS sampling manager to track the progress of sample collection throughout each day. LRS staff will confirm with the driver that the material being discarded is from the desired residential generating sector and was collected from the desired zone. Once confirmed, the LRS staff will communicate vehicle identification information (i.e., company name, truck color, truck number, etc.) to the SCS sampling manager. The SCS sampling manager will confirm the information.

SAMPLE SIZE DETERMINATION

The sample sizes based on the material stream targeted is determined using ASTM Standard D5231092 (2024) and the Environmental Protection Agency (EPA) 2016 volume to weight conversions. The table below identifies the processes of determining the sample sizes based on the material stream.

Table 2. Sample Size Determination

Material Stream	Individual Sample Size	Reference
MSW	200-220 pounds	ASTM Standard D5231092 (2024) • Confirms a sample size between 200-220 pounds to be representative.
Recycling	Two 95-gallon containers	EPA Volume to Weight Conversions (2016) • Containers (Plastic bottles, Aluminum cans, Steel cans, Glass bottles), Corrugated Containers and Paper as Commingled Recyclables have a volume to weight conversion of 111 pounds to 1 cubic yard. • To achieve a representative sample, two 95-gallon containers will be obtained for an estimated 100 pounds of material.
Organics	Two 95-gallon containers	EPA Volume to Weight Conversions (2016) • Mixed Yard Waste as Uncompacted has a volume to weight conversion of 250 pounds to 1 cubic yard. • To achieve a representative sample, two 95-gallon containers will be obtained for an estimated 200 pounds of material.

OBTAINING SAMPLES

If a targeted material load is deemed suitable for sampling and sorting, the SCS staff will work with an LRS loader operator to obtain a specific sample size of the material. The process of acquiring the material sample will not alter the composition.

SCS will visually divide the material pile into six equally sized segments and use a random number generator table (1-6) to select the location from which the sample should be collected. This information will be communicated to the LRS loader operator obtaining the sample. The sample will be delivered to the sorting area to be placed in containers and weighed. Each sample will be

assigned a unique identifying number which will be recorded, along with other sample information (hauler company, truck number, weather conditions, date/time collected, etc.), on a sample data collection form which will be given to the host facility equipment operator as the sample is extracted and brought to the sort staff. SCS anticipates obtaining only one sample per truck.

Table 3. Sample Obtaining Methodology Summary

Step #	Action
1.	Discuss sampling schedule with LRS staff.
2.	LRS staff interview the driver to complete general field form information.
3.	If conditions allow, an SCS staff member takes photos and record observations of tipped materials (i.e. mattresses and tires).
4.	Segment the pile into 6 zones and use a random number generator to select a zone.
5.	Inform LRS staff which part of the pile is to be collected and transported to the sorting area.

SAMPLE CREATION

The SCS staff will facilitate the creation of each sample, observing and instructing the processes for placement and weighing of materials. The following tables dictate the procedure for creating samples of MSW (Table 4), recycling (Table 5), and organics (Table 6).

Table 4. MSW Sample Creation

Step #	Action
1.	Sample containers are placed below the loader bucket to capture waste materials that fall during loader maneuvers and sample creation.
2.	SCS staff communicate with the loader operator to adjust the loader bucket of material to be an ideal height and angle for sample creation.
3.	SCS and contractor staff utilize rakes and shovels to push waste into the sample containers until full.
4.	Containers with the material are brought to the scale where the SCS staff will document the weight and calculate the progress of meeting the 200–220-pound sample excluding tare weights of containers.
5.	Once the sample has reached the target weight, the sample is staged for manual sorting and marked to identify all containers associated with the sample.

Table 5. Recycling Sample Creation

Step #	Action
1.	Two 95-gallon sample containers are placed below the loader bucket to capture recycling materials that fall during loader maneuvers and sample creation.
2.	SCS staff communicate with the loader operator to adjust the loader bucket of material to be an ideal height and angle for sample creation.
3.	SCS and contractor staff utilize rakes and shovels to push recycling into the two sample containers until full.
4.	Containers with the material are brought to the scale where the SCS staff will document the weight of the sample excluding tare weights of containers.
5.	The sample is staged for manual sorting and marked to identify all containers associated with the sample.

Table 6. Organics Sample Creation

Step #	Action
1.	Two 95-gallon sample containers is placed below the loader bucket to capture organic materials that fall during loader maneuvers and sample creation.
2.	SCS staff communicate with the loader operator to adjust the loader bucket of material to be an ideal height and angle for sample creation.
3.	SCS and contractor staff utilize rakes and shovels to push organics into the one sample container until full.
4.	Containers with the material are brought to the scale where the SCS staff will document the weight of the sample excluding tare weights of containers.
5.	Organic material is then offloaded onto the ground, where SCS staff and contractors will remove contamination from the organics pile into a secondary sample container.
6.	Contamination is then weighed and staged for manual sorting and marked to identify all containers associated with the sample.

SORTING PROCEDURE

An experienced SCS staff professional will lead the waste sorting process and protocol with the support of a sort crew. The SCS sorting manager will oversee the entire material characterization process and conduct quality control measures to ensure materials are sorted and weighed correctly. Each member of the sorting crew will be assigned specific material categories for sorting. Assigning crew members specific categories improves the efficiency and accuracy of the sorting process as sort crew members specialize and become experts in sorting the material components they are assigned.

Tare weights of the containers will be recorded prior to the start of sort activities and as necessary (i.e., minor container damage such as broken handle or wheel, significant residual build up in the container, etc.). The basic procedures and objectives for manual sorting will be identical for each selected sample as described in the table below.

Table 7. Sorting Procedures

Step #	Action
1.	A sample of material is transferred from containers to a sort table and photographed; large or heavy items, such as wood panels or bulky waste, are examined and placed directly into the appropriate container for subsequent weighing.
2.	Plastic bags containing materials are opened and contents are manually sorted according to the agreed upon list of materials; separated materials are placed in a unique container and this process continues until the sample has been completely sorted.
3.	Sorting of materials continues until the sample has been characterized down to small indistinguishable particle size of 2-inches or less. These small materials are removed from the sorting table and placed in a separate container for weighing as "fines."
4.	Containers with the sorted materials are individually weighed by the sorting manager who also performs additional quality control measures to confirm the purity of each sorted material category; measurements are made to the nearest tenth of a pound and are recorded on the data sheet.
5.	Upon completion of weighing sorted materials and recording the data for each sample, the materials are placed in a container for disposal, recycling, or composting, and hazardous or dangerous materials (i.e., needles, lithium batteries, etc.) are placed in a separate container for diversion (if provided by a host facility); containers are then emptied as appropriate by the host facility.

MATERIAL SORT GROUPS AND CATEGORIES

Samples will be sorted into material categories defined in **Attachment 1.** The material components are similar to those listed in the 2015 Study, with some additions and clarifications for the 2025 list. These material categories are approved by the Village for use in greenhouse gas (GHG) inventories and policy making in the future.

5 DATA RECORDING

The SCS staff will use the MSW Characterization Form, Recycling Characterization Form, and Organics Characterization Form to record information gathered from the driver interviews of the selected load and material weights.

Before the end of the workday, SCS staff will perform the following:

- Discuss sample activities and desired loads to be selected for sampling with the LRS Facility scale house staff.
- Review forms for completion and accuracy.
- Create a digital file of the completed field sampling forms.

6 SCHEDULE

Table 8 details the schedule for this study. Work will take place Monday through Friday, primarily during the facility's operating hours.

Table 8. Sort Schedule

Sort Dates	LRS Facility Activities
August 25 – August 29, 2025	Manual sort of MSW, recycling, and organics will collect 60 samples from residential-generated material over approximately five days.

7 HEALTH AND SAFETY

The health and safety of employees is paramount to SCS. A Site-Specific Health and Safety Plan was prepared and reviewed by SCS staff before commencing work. SCS will provide a Health and Safety plan for the project that will be reviewed by SCS staff and other staff as appropriate. Before activities initiate the first morning, the Health and Safety Plan will be reviewed by those participating in the sort and signed off by each individual. Safety will be revisited each subsequent morning and throughout the day as needed. Communication between the SCS sample manager and LRS Facility staff will be required (i.e., two-way walkie-talkies) to identify sample loads.

8 VILLAGE OF OAK PARK MATERIAL CHARACTERIZATION REPORT

SCS will prepare a summary report of the MSW, recycling, and organics sort material composition results based on the Village-generated materials. This report will provide a summary of project results and details of established methodologies.

Attachment 1

Material Categories

MSW Characterization Groups and Categories Descriptions

Material Category	Material Component	Definitions
PAPER	Newspaper	Includes newspaper and all items made from newsprint, such as free advertising guides, election guides, plain news packing paper, stapled college schedules of classes, and tax instruction booklets.
	High Grade Office Paper	Includes white and pastel bond, rag, or stationary grade paper, with or without ink. Examples include photocopy, laser print, letter paper, computer paper used for computer printouts, and notebook or ledger paper.
	Magazines/Catalogs	Includes magazines and catalogs and other items made of glossy coated paper. This paper is usually slick, smooth to the touch, and reflects light. Does not include phone books.
	Uncoated OCC/Kraft	Includes uncoated cardboard items with a wavy core, without wax coating on the inside or outside. Examples include shipping and moving boxes, computer packaging cartons, sheets and pieces of boxes and cartons, Kraft paper bags, and other Kraft paper. Does not include chipboard.
	Boxboard	Includes chipboard not coated with wax, metal, or plastic. Also includes paperboard such as cereal and tissue boxes.
	Mixed Paper - Recyclable	Includes all other recyclable papers not elsewhere described. Includes phone books and directories, junk mail, envelopes, brightly colored ledger paper and other dry paper, manila folders, index cards, carbonless forms, and egg cartons. Mixed Recyclable Paper may be combined with minor amounts of other material such as wax or glues.
	Compostable Paper	Includes low grade and food and/or moisture contaminated paper which is compostable. Examples include paper towels, paper plates, waxed papers, and tissues.
	Other Paper	Includes items made mostly of paper but combined with large amounts of other materials such as wax, plastic, glues, foil, and wire. Examples include blueprints, sepia, onion skin, foiled lined fast food wrappers, carbon paper, coated OCC, and photographs.
BEVERAGE/ FOOD CONTAINERS	Milk & Juice Cartons/Boxes - Coated	Includes aseptic packages and poly coated (gable top) cartons.

Material Category	Material Component	Definitions
PLASTICS	#1 PET Bottles/Jars	Includes clear or colored PET bottles (i.e., narrow neck containers) and jars marked with a #1. May also bear the letters "PETE" or "PET." The color is usually transparent green or clear and does not turn white when bent. Examples include soft drink bottles, some liquor bottles, and cooking oil containers.
	#1 Other PET Containers and Packaging	Includes PET containers and packaging marked with a #1 and potentially bearing the letters "PETE" or "PET."
	#2 HDPE Bottles/Jars - Clear	Includes bottles (i.e., narrow neck containers) and jars marked with #2 that are cloudy white, allowing light to pass through it (natural) Examples include milk jugs, water jugs, some hair-care bottles, and other clear empty fluid containers marked with #2 or "HDPE."
	#2 HDPE Bottles/Jars - Color	Includes bottles (i.e., narrow neck containers) and jars marked with #2 that are a solid color, preventing light from passing through it (pigmented). Examples include detergent bottles, some hair-care bottles, empty motor oil, empty antifreeze, and other empty vehicle and equipment fluid containers marked with #2 or "HDPE."
	#2 Other HDPE Containers and Packaging	Includes HDPE containers and packaging marked with a #2 and potentially bearing the letters "HDPE."
	#5 PP Containers	Includes PP containers and packaging marked with a #5 and potentially bearing the letters "PP": Examples include yogurt tubs, take out containers, etc.
	#5 Other PP	Packaging bearing the number “5” in the triangular recycling symbol and may also bear the letters “PP” that is packaging (i.e., non-container).
	#6 Expanded Polystyrene Packaging	Includes formed or sheet expanded polystyrene (EPS) items marked with a PS or a #6, used for packaging and shipping. Examples include items used for food packaging or food service, food trays, egg cartons, packaging peanuts, packaging blocks, and coolers.
	#3, #4, #6 (Non-Expanded), and #7 Other	Includes bottles, jars, and containers marked #3, #4, #6 (non-expanded) or #7.
	Other Rigid Plastic Products	Includes plastic items (excluding containers or plastic film that has the type of plastic marked on the material). Examples include plastic outdoor furniture, plastic toys and sporting goods, CDs, and plastic house wares, such as mop buckets, dishes, cups, cutlery, fan blades, impact-resistant cases such as tool boxes and first aid boxes, and buckets.

Material Category	Material Component	Definitions
PLASTICS (continued)	Grocery & Merchandise Bags	Includes labeled grocery and merchandise, dry cleaner, and newspaper polyethylene film bags that were not contaminated with food, liquid or grit during use.
	Trash Bags	Includes polyethylene film bags that were used to contain garbage such as black or transparent trash bags.
	Commercial & Industrial Film	Includes film plastic used for large-scale packaging or transport packaging, such as industrial film, wrappings, plastic strapping, other thin flexible plastic packaging, plastic sheeting, and shrink wrap.
	Other Film	Includes film packaging not defined above, such as film that is woven together (e.g., grain bags); contains multiple layers of film or other materials that have been fused together (e.g., potato chip bags); is used to contain food or liquid (e.g., produce and bread bags); plastic sheeting; photographic negatives; shower curtains, and vinyl products.
	Other Plastic	Includes plastic items not elsewhere classified as well as items made mostly of plastic but combined with other materials. Examples include disposable razors, pens, lighters, 3-ring binders, auto parts made of plastic attached to metal, plastic outdoor furniture, and other objects that contain more than 50% plastic, etc.
GLASS	Recyclable Glass Bottles & Jars	Includes clear, green, brown, and other colored glass bottles and jars containing beverages, food, or consumable liquids. Examples include whole or broken clear or colored soda, beer bottles, fruit juice bottles, peanut butter jars, mayonnaise jars, wine bottles, cosmetic jars and non prescription medical bottles.
	Flat Glass	Includes clear or tinted glass that is flat, such as glass window panes, doors, table tops, flat automotive window glass (side windows), safety glass, and architectural glass. This category does not include windshields, laminated glass, or any curved glass.
	Other Glass	Includes glass that cannot be put in any other type or subtype. It includes items made mostly of glass but combined with other materials, such as Pyrex, crystal and other glass tableware, auto windshields, and incandescent light bulbs.
METAL	Aluminum Beverage Containers	Includes any food or beverage container made mainly of aluminum, such as aluminum soda or beer cans and some pet food cans. This does not include bimetal containers with steel sides and aluminum ends.
	Other Aluminum	Includes items such as aluminum foil, pie plates, trays, siding, and furniture.

Material Category	Material Component	Definitions
METAL (continued)	HVAC Ducting	Includes sheet metal tubing, typically galvanized, used for conveying ventilation air.
	Ferrous Containers (Tin Cans)	Includes rigid containers made mainly of steel, such as items that will stick to a magnet and may be tin-coated. This subtype is used to store food, beverages, paint, and a variety of other household and consumer products. Examples include canned food and beverage containers, empty metal paint cans, empty spray paint and other aerosol containers, and bimetal containers with steel sides and aluminum ends.
	Other Ferrous	Includes iron or steel that is magnetic or any stainless steel item, other than ferrous/bimetal cans. Examples include structural steel beams, boilers, metal clothes hangers, metal pipes, rebar, stainless steel cookware, security bars, scrap ferrous items, and galvanized items such as nails and flashing.
	Other Non-Ferrous	Includes any metal item, other than aluminum cans, that is not magnetic. These items may be made of copper, brass, aluminum, bronze, lead, zinc, or other metals. Examples include aluminum window frames, aluminum siding, copper wire, shell casings, brass pipe, and aluminum foil.
	Other Metal	Includes metal that cannot be put in any other category. This category includes items made mostly of metal but combined with other materials and items made of both ferrous metals and non-ferrous metal combined. Examples include small non-electronic appliances such as toasters and hair dryers, motors, insulated wire, and finished products that contain a mixture of metals or metals and other materials, whose weight is derived significantly from the metal portion of its construction.
ORGANICS	Yard Waste - Compostable	Includes leaves, grass clippings, garden debris, pruning, shrubs, and small branches up to 2 inches in diameter from any public or private landscapes.
	Yard Waste - Woody	Includes vegetative woody plant material, branches, shrubs, and stumps that exceed 2 inches in diameter from any public or private landscape.

Material Category	Material Component	Definitions
ORGANICS (continued)	Food Waste - Unpackaged	Includes food material capable of being composted (including scrap animal parts). This type includes materials resulting from the processing, storage, preparation, cooking, handling or consumption of food and material from industrial, commercial or residential sources. Examples include discarded meat scraps, dairy products, egg shells, fruit or vegetable peels, and other food items from homes, stores, and restaurants. This type includes grape pomace and other processed residues or material from canneries, wineries, or other industrial sources. Food material resulting from the processing, storage, preparation, cooking, handling, or consumption of food; includes material from industrial, commercial, or residential sources; examples include discarded meat scraps, dairy products, eggshells, fruit or vegetable peels, vitamins/supplements, and other food items from homes, stores and restaurants. Includes food in packages if it has been opened or consumed in some capacity. Also includes anything spoiled, moldy, half-eaten, containing liquid, or otherwise makes it unfit for consumption
	Food Waste - Packaged	Food material still in the original packaging; includes material from industrial, commercial, or residential sources. Examples include unopened food packaging or food not processed or consumed. Example: sauce packets, candy, whole produce. Food which is fit for human consumption and meets criteria for suitability for rescue/donation, generally limited to large quantities of pre-consumer surplus food;
	Bottom Fines & Dirt	Includes organic fragments that would pass through 1/4 inch screen. Examples include sand, soil, clay, and dirt.
	Diapers and Sanitary Products	Diapers made from a combination of fibers, synthetic, and/or natural, and made for the purpose of single use. This includes disposable baby diapers, adult protective undergarments, pee pads, and sanitary products.
	Other Compostable	Includes organic material that cannot be put in any other category such as items made mostly of organic materials but combined with other materials. Examples include cork, hemp rope, cigarette butts, sawdust, animal feces, and dead animals.

Material Category	Material Component	Definitions
TEXTILES	Carpet	Includes material consisting mainly of carpet flooring applications and rugs consisting of various natural or synthetic fibers bonded to some type of backing material.
	Carpet Padding	Includes plastic, foam, felt, and other materials used under carpet to provide insulation and padding.
	Clothing	Includes items made of thread, yarn, fabric, cloth, clothes, natural and synthetic cloth fibers, and leather clothing goods.
	Other Textiles	Includes drapes, curtains, bedding, blanket, upholstery, shoes, and other products mostly of textiles and leather.
IN-ORGANICS	Rubber Products	Rubber and latex products and scrap materials such as bath mats, inner tubes, rubber hoses, and foam rubber pieces, not including inflatable mattresses (vinyl). Does not include tires (tires) or latex/rubber gloves (medical and infectious waste).
	Syringes/Needles	Needles, syringes, and diabetic testing lancets.
	Medical and Infectious Waste	any “red bag” material; Medical related items that may present an exposure or biohazard (i.e., bloody gowns, latex/rubber gloves, surgical equipment, medicine, plasma, etc.). Medicine includes items such as Tylenol, inhalers, and prescription/non-prescription items. This does not include vitamins or supplements.
	Televisions	Includes televisions.
	Computer Monitors	Includes computer monitors containing a cathode ray tube (CRT), including oscilloscopes. Does not include laptops and LCD monitors.
	Computer Equipment/Peripherals	Includes keyboards, printers, modems, etc.
	Electronic Equipment/Peripherals	Means large and small electronic goods that have circuitry. Examples include stereos, VCRs, DVD players, radios, audio/visual equipment, and non-CRT televisions (such as LCD televisions); computer related electronics such as processors, mixed, keyboards, laptops, disk drives, printers, modems, and fax machines; and other small consumer goods such as personal digital assistants (PDAs), cell phones, phone systems, phone answering machines, computer games and other electronic toys, portable CD players, camcorders, and digital cameras.

Material Category	Material Component	Definitions
IN-ORGANICS (continued)	White Goods - Refrigerated	Includes goods made mostly of metal but combined with other materials and items made of both ferrous and non-ferrous metals combined. Examples include large appliances such as refrigerators, freezers, and dehumidifiers.
	White Goods - Not Refrigerated	Includes items made of plastics and both ferrous and non-ferrous metals combined. Examples include large appliances and parts thereof such as stoves, washers, dryers, water heaters, and microwaves; as well as small appliances such as fans, irons, and hair dryers.
	Lead-Acid Batteries	Includes batteries with liquid acid and lead cells, such as car, truck, lawn mower, and other batteries used to store power.
	Other Household Batteries	Includes any type of dry cell battery, such as flashlight, small appliance, watch, and hearing aid batteries.
	Items Containing Lithium Batteries	Rechargeable plastic items or plastic items containing lithium batteries. Includes vaping devices, various plastic toys, or plastic instruments. Does not include electronics.
	Lithium Batteries	Lithium batteries separate from plastic or metal device
	Tires	Includes whole tires from automobiles, trucks, motorcycles, bicycles, wagons, and other transport vehicles.
	Household Bulk Items	Includes multi-material furniture items such as couches, chairs, hutches, tables, entertainment centers, fragments of furniture items, and mattresses (fabric coated framed or unframed wire coil bulky item used for sleeping).
	Fluorescent Lights/Ballasts	Includes a lamp tube that is able to be screwed or plugged in to a lamp or over head light that produces visible light by Fluorescent, especially a glass tube whose inner wall is coated with a material that fluoresces when an electrical current causes a vapor within the tube to discharge electrons. Includes fluorescent lights, ballasts, and compact fluorescent bulbs (CFL).
	Solar Panels	Photovoltaic device that is used to absorb the sun's rays and convert them into electricity or heat. Typically contains solar cells, glass, aluminum frame, and an electronic junction box.

Material Category	Material Component	Definitions
CONSTRUCTION & DEMOLITION	C&D contained in the MSW loads	Roof shingles, brick, rock/gravel, concrete, general C&D, gypsum board, and metal
	Untreated Wood	Refers to any wood which does not contain an adhesive, paint, stain, fire retardant, pesticide or preservative; includes such items as pallets, skids, spools, packaging materials, bulky wood waste or scraps from newly built wood products and wood pallets; does not include land clearing debris or yard waste pruning and trimmings
	Treated Wood	Wood that contains an adhesive, paint, stain, fire retardant, pesticide or preservative; includes all engineered wood.
HOUSEHOLD HAZARDOUS WASTE	Chemicals (Liquid or Solid)	Includes latex and other water-based paints and similar products, alkyd and enamel based paints, aerosol paints, and related products; Includes solvents, motor oil, degreasers, chlorinated, paint stripper, and any product where the primary ingredient is a solvent or alcohol; pesticides/fertilizers, cleaners, antifreeze, acids, and bases.
OTHER	Non-distinct	Miscellaneous materials not elsewhere identified, kitty litter, wax, soap, hair, full vacuum bags, etc.
	Unclassifiable Fines	Un-sortable small fragments (generally less than 1/2 inch in diameter); mainly composed of in-organic material and miscellaneous fines and dirt.

Recycling Characterization Groups and Categories Descriptions

Material Category	Material Component	Definitions
PAPER	Uncoated Corrugated Cardboard	Non-waxed shipping/moving boxes, 3-layers with waffle-like/wavy inner layer
	Chipboard & Kraft Paper	Non-corrugated, single layer cardboard. Containers such as cereal, spaghetti, cracker and shoe boxes.
	Newspaper	Anything printed on the type of paper generally used for newspapers, including advertising inserts printed on newspaper
	Mixed Paper	Magazines, catalogs, junk mail, index cards, manila envelopes, paperback books, telephone books, gift wrapping paper, etc.
	Aseptic, Gable Top, and Tetra Pak containers	Food or drink related containers made of layered paper and contain aluminum foil and/or plastic. Juice boxes, chicken/beef/veggie broth boxes, soup containers, wine containers.
	White Office Paper	White office and computer paper
PLASTIC	#1 PET	Plastic soft drink, water, and other containers marked with #1 or PET
	#2 HDPE	Milk or water jugs, detergent bottles, and other containers marked with #2 or HDPE
	#3 PVC	Narrow neck containers marked with #3 or PVC such as household cleaners, health and beauty products, etc.
	#4 LDPE	Margarine tubs and plastic rings from beverage cans; Does not include film
	#5 PP	Yogurt cups, narrow neck syrup and ketchup bottles, and other similar containers marked with #5 or PP
	#7 Other	Plastic resin grocery narrow neck containers
METALS	Aluminum Containers	Food and beverage cans made entirely of aluminum. Includes most soda and beer cans as well as aluminum pet food cans. Also includes clean aluminum foil and formed containers. (Does not include aluminum aerosol spray cans or bimetal cans.)
	Aluminum Foil and Formed Containers	Foil, pie plates, roasting/baking pans, storage and serving trays, some pet food, and similar materials
	Steel/Tin Containers	Food and beverage containers with steel sides. Includes detached tops if made of steel.
	Aerosol Cans (empty)	Empty pressurized steel/aluminum containers. Includes spray paint, hairspray, room deodorizers
	Paint Cans (empty)	Empty latex and oil paint containers

Material Category	Material Component	Definitions
GLASS	Glass Bottles & Jars (all colors)	Glass containers with and without any color or tint in the glass. Includes caps left on empty containers by the consumer.
CONTAMINATED RECYCLABLES	Contaminated Corrugated Cardboard	Recyclable materials containing more than 20% food, liquid, oil, or other substance making the material unacceptable for recycling
	Other Contaminated Paper	
	Contaminated #1 PET	
	Contaminated #2 HDPE	
	Contaminated #5 PP	
	Other Contaminated Plastic	
	Contaminated Metal Foil and Formed Containers	
	Other Contaminated Metals	
	Contaminated Glass	
MISCELLANEOUS CONTAMINATION	Organic Waste	Food, yard waste, animal waste
	Plastic Bags and Film	Product and packaging wrap, such as retail shopping bags, newspaper bags, food storage bags, and produce/bread bags
	Polystyrene	Styrofoam™ materials, packaging peanuts, food carryout containers, plates, bowls, beverage cups, utensils, straws, egg cartons, meat/poultry trays. etc.
	Rope and String-Like Products	Long and thin materials such as rope, string, twine, power cords, extension cords, garden hoses, Christmas lights, and similar materials
	Electronics	Manufactured or assembled devices powered by a battery source or a plug-in cord. Examples include computers, laptops, tablets, cellphones, toasters, hair dryers, power tools, fans, etc.
	Hazardous Waste	Chemical containers such as paint, cleaning products, pesticide products, etc. with chemicals still remaining in the container
	Propane Tanks	Pressurized, cylindrical, metal container designed to store liquefied propane gas. Not acceptable even if container is completely empty.

Material Category	Material Component	Definitions
MISCELLANEOUS CONTAMINATION (continued)	Manufactured Products	Toys, instruments, sporting goods such as balls, gloves, golf clubs and bag, mitts, cones, rackets, fishing rods, and sports shoes
	Medical Waste	PPE, bandages, syringes, etc.
	Aerosol Cans (not empty)	Pressurized steel/aluminum containers that are not empty. Includes spray paint, hairspray, room deodorizers
	Non-Recyclable Paper	Non-recyclable and non-compostable types of paper products such as carbon paper, hardcover books, and composite materials containing paper mixed with metal or plastic parts.
	Non-Recyclable Plastic	Plastic items not categorized as recyclable including toys, totes, Tupperware, baby pools, clothes hangers, cleaning tools, drinking straws, serving utensils, plastic cards, and plastic strapping
	Non-Recyclable Glass	Ceramics, drinking glasses, glass plates, cooking utensils, ash trays, decorative glass containers, vases, perfume bottles, or containers for cosmetic products
	Non-Recyclable Metal	Non-container metals such as precious metals (brass, copper, etc.), metal clothes hangers, sheet metal products, pipes, steel drums, stainless steel cookware, flashing, metal scraps, metal furniture, and metal mixed with another non-metal component.
	Refuse	Municipal solid waste that is not otherwise captured in other categories

Organics Characterization Groups and Categories Descriptions

Material Category	Material Component	Definitions
PAPER	Aseptic, gable top, and Tetra Pak containers	Food or drink related containers made of layered paper and contain aluminum foil and/or plastic. Dairy cartons, Juice boxes, chicken/beef/veggie broth boxes, soup containers, wine containers.
	Non-Compostable Paper	Paper material that is not compostable due to plastic or metal lining. May include additional products.
	Recyclable Paper	Paper material that is recyclable as defined by the Village's recycling program.
PLASTIC	Plastics that do not meet ASTM 6400 & 6868 compostable standards	Materials marked as compostable but not certified by ASTM standards
	Plastic Wraps, Film, Pouches	Plastic packaging, food storage bags, and serving ware such as plates, cups, and utensils.
	Garbage Bags	Retail shopping bags and garbage bags.
	Polystyrene	Styrofoam™ materials, packaging peanuts, food carryout containers, plates, bowls, beverage cups, utensils, straws, egg cartons, meat/poultry trays. etc.
	Non-Recyclable Plastics	Plastic material that is not recyclable as defined by the Village's recycling program.
	Recyclable Plastics	Plastic material that is recyclable as defined by the Village's recycling program.
METALS	Non-Recyclable Metals	Metal material that is not recyclable as defined by the Village's recycling program. Examples include contaminated containers and foils.
	Recyclable Metals	Metal material that is recyclable as defined by the Village's recycling program.
GLASS	Non-Recyclable Glass	Glass material that is not recyclable as defined by the Village's recycling program.
	Recyclable Glass	Glass material that is recyclable as defined by the Village's recycling program.
MISCELLANEOUS CONTAMINATION	Animal Waste	Feces from animals.
	Diapers & Sanitary Products	Plastic disposable diapers, pee pads, cloth diapers, and sanitary products
	Woody Materials	Tree stumps, trunks, roots or shrubs with intact root balls and clean branches.
	Rocks, Soil, Sand	Includes soil and clay, solid materials, and loose granular substances.

Material Category	Material Component	Definitions
MISCELLANEOUS CONTAMINATION (continued)	Electronics	Manufactured or assembled devices powered by a battery source or a plug-in cord. Examples include computers, laptops, tablets, cellphones, toasters, hair dryers, power tools, fans, etc.
	Hazardous Waste	Chemical containers such as paint, cleaning products, pesticide products, etc.
	Medical Waste	Materials used in medical settings and processes such as PPE, bandages, syringes, etc.
	Manufactured Products	Including toys, instruments, sporting goods such as balls, gloves, golf clubs and bags, mitts, cones, rackets, fishing rods, and sports shoes
	Refuse and Non-Distinct	Municipal solid waste and items that are not classified in other material categories. Includes items such as pet fur, hair, etc.
	Unclassifiable Fines	Un-sortable small fragments (generally less than 1/2 inch in diameter); mainly composed of organic material and miscellaneous fines and dirt.

Attachment **C**

Overall Material Composition Tables

MSW Material Composition – Detailed Overall

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Newspaper	0.3%	0.5%	0.2%	0.5%
	High Grade Office Paper	1.2%	1.0%	0.9%	1.6%
	Magazines/Catalogs	0.7%	1.3%	0.3%	1.1%
	Uncoated OCC/Kraft	2.4%	2.0%	1.7%	3.1%
	Boxboard	2.3%	0.8%	2.0%	2.6%
	Mixed Paper - Recyclable	5.2%	1.7%	4.6%	5.7%
	Compostable Paper	8.6%	2.6%	7.8%	9.5%
	Other Paper	0.3%	0.4%	0.2%	0.4%
	Total	**21.1%**	**4.3%**		
Beverage/Food Containers					
	0.4%	0.4%	0.9%	0.1%	0.7%
	Total	**0.4%**	**0.9%**		
Plastics					
	#1 PET Bottles/Jars	1.0%	0.4%	0.9%	1.1%
	#1 Other PET Containers & Packaging	0.8%	0.3%	0.7%	0.9%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.2%	0.2%	0.3%
	#2 HDPE Bottles/Jars - Color	0.5%	0.3%	0.4%	0.6%
	#2 Other HDPE Containers & Packaging	<0.1%	0.1%	<0.1%	<0.1%
	#5 PP Containers	1.2%	0.8%	0.9%	1.5%
	#5 Other PP	0.3%	0.1%	0.2%	0.3%
	#6 Expanded Polystyrene Packaging	0.8%	0.3%	0.7%	0.9%
	#3, #4, #6 (Non-Expanded), and #7 Other	0.6%	0.4%	0.5%	0.7%
	Other Rigid Plastic Products	2.3%	2.0%	1.7%	3.0%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Grocery & Merchandise Bags	0.9%	0.3%	0.8%	1.0%
	Trash Bags	1.9%	0.5%	1.7%	2.1%
	Commercial & Industrial Film	2.4%	1.2%	2.0%	2.7%
	Other Film	2.5%	1.2%	2.1%	2.9%
	Other Plastic	0.2%	0.1%	0.2%	0.3%
	Total	**15.7%**	**3.6%**		
Glass					
	Recyclable Glass Bottles & Jars	1.5%	1.0%	1.1%	1.8%
	Flat Glass	<0.1%	<0.1%	<0.1%	<0.1%
	Other Glass	0.3%	0.4%	0.2%	0.5%
	Total	**1.8%**	**1.0%**		
Metals					
	Aluminum Beverage Containers	0.4%	0.3%	0.3%	0.5%
	Other Aluminum	0.5%	0.2%	0.4%	0.5%
	HVAC Ducting	<0.1%	<0.1%	<0.1%	<0.1%
	Ferrous Containers (Tin Cans)	0.4%	0.2%	0.3%	0.5%
	Other Ferrous	0.7%	0.5%	0.6%	0.9%
	Other Non-Ferrous	0.2%	0.3%	<0.1%	0.3%
	Other Metal	0.3%	0.2%	0.2%	0.3%
	Total	**2.5%**	**0.8%**		
Organics					
	Yard Waste - Compostable	3.8%	4.7%	2.2%	5.4%
	Yard Waste - Woody	1.1%	3.2%	<0.1%	2.1%
	Food Waste - Unpackaged	18.7%	5.0%	17.0%	20.3%
	Food Waste - Packaged	4.7%	2.5%	3.9%	5.5%
	Bottom Fines & Dirt	0.8%	3.2%	<0.1%	1.9%
	Diapers & Sanitary Products	4.1%	2.7%	3.2%	5.0%
	Other Compostable	3.4%	4.2%	2.1%	4.8%
	Total	**36.6%**	**8.4%**		

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Textiles					
	Carpet	<0.1%	<0.1%	<0.1%	<0.1%
	Carpet Padding	0.3%	1.7%	<0.1%	0.9%
	Clothing	1.7%	2.2%	1.0%	2.4%
	Other Textiles	3.1%	2.4%	2.3%	3.9%
	Total	**5.2%**	**3.6%**		
Inorganics					
	Rubber Products	0.4%	0.5%	0.2%	0.5%
	Syringes/Needles	<0.1%	<0.1%	<0.1%	<0.1%
	Medical & Infectious Waste	0.1%	0.2%	<0.1%	0.2%
	Television	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Monitors	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Equipment/Peripherals	<0.1%	<0.1%	<0.1%	<0.1%
	Electronic Equipment/Peripherals	0.7%	0.7%	0.4%	0.9%
	White Goods - Refrigerated	<0.1%	0.2%	<0.1%	<0.1%
	White Goods - Not Refrigerated	<0.1%	<0.1%	<0.1%	<0.1%
	Lead-Acid Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Other Household Batteries	<0.1%	0.1%	<0.1%	<0.1%
	Items Containing Lithium Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Lithium Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Tires	<0.1%	<0.1%	<0.1%	<0.1%
	Household Bulk Items	<0.1%	<0.1%	<0.1%	<0.1%
	Fluorescent Lights/Ballasts	<0.1%	0.1%	<0.1%	<0.1%
	Solar Panels	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**1.4%**	**0.9%**		
C&D Debris					
	C&D Contained in the MSW Loads	1.9%	3.5%	0.7%	3.1%
	Untreated Wood	1.9%	5.4%	0.1%	3.7%
	Treated Wood	4.0%	3.7%	2.8%	5.2%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Total	**7.8%**	**7.9%**		
Household Hazardous Waste					
	Chemicals (Liquid or Solid)	0.6%	1.4%	0.1%	1.1%
	Total	**0.6%**	**1.4%**		
Other Wastes					
	Non-Distinct	3.3%	4.8%	1.7%	4.8%
	Unclassifiable Fines	3.7%	1.8%	3.1%	4.3%
	Total	**7.0%**	**5.0%**		
	Total of Overall Waste	**100%**			

Recycling Material Composition – Detailed Overall

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Uncoated OCC	25.3%	9.7%	22.1%	28.5%
	Chipboard & Kraft Paper	13.3%	4.9%	11.7%	14.9%
	Newspaper	1.8%	2.3%	1.0%	2.5%
	Mixed Paper	11.5%	5.1%	9.9%	13.2%
	White Office Paper	3.0%	3.9%	1.7%	4.3%
	Aseptic, Gable Top & Tetra Pak Containers	0.8%	0.5%	0.6%	1.0%
	Total	**55.8%**	**12.3%**		
Plastics					
	#1 PET	5.7%	1.5%	5.2%	6.2%
	#2 HDPE	2.8%	1.1%	2.4%	3.1%
	#3 PVC	<0.1%	0.2%	<0.1%	<0.1%
	#4 LDPE	<0.1%	<0.1%	<0.1%	<0.1%
	#5 PP Containers	1.8%	1.5%	1.3%	2.3%
	#7 Other	1.5%	2.3%	0.7%	2.3%
	Total	**11.9%**	**3.4%**		
Metals					
	Aluminum Containers	2.7%	1.5%	2.2%	3.2%
	Aluminum Foil & Formed Containers	0.4%	0.7%	0.1%	0.6%
	Steel/Tin Containers	1.5%	0.7%	1.3%	1.8%
	Aerosol Cans (Empty)	<0.1%	0.2%	<0.1%	<0.1%
	Paint Cans (Empty)	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**4.7%**	**1.8%**		
Glass					
	Glass Bottles & Jars (All Colors)	18.9%	10.3%	15.5%	22.3%
	Total	**18.9%**	**10.3%**		
Contaminated Recyclables					
	Contaminated Corrugated Cardboard	0.5%	1.5%	<0.1%	1.0%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Other Contaminated Paper	0.3%	0.5%	0.2%	0.5%
	Contaminated #1 PET	0.4%	0.6%	0.2%	0.6%
	Contaminated #2 HDPE	0.1%	0.4%	<0.1%	0.2%
	Contaminated #5 PP	<0.1%	0.2%	<0.1%	<0.1%
	Other Contaminated Plastic	<0.1%	0.2%	<0.1%	<0.1%
	Contaminated Metal Foil & Formed Containers	<0.1%	<0.1%	<0.1%	<0.1%
	Other Contaminated Metals	0.4%	1.4%	<0.1%	0.9%
	Contaminated Glass	0.5%	1.1%	0.1%	0.8%
	Total	**2.4%**	**2.8%**		
Miscellaneous Contamination					
	Organic Waste	0.5%	1.1%	0.1%	0.9%
	Plastic Bags & Film	1.1%	0.6%	0.9%	1.3%
	Polystyrene	0.3%	0.3%	0.2%	0.4%
	Rope & String-Like Products	<0.1%	0.2%	<0.1%	<0.1%
	Electronics	0.2%	0.7%	<0.1%	0.4%
	Hazardous Waste	<0.1%	<0.1%	<0.1%	<0.1%
	Propane Tanks	<0.1%	<0.1%	<0.1%	<0.1%
	Manufactured Products	0.1%	0.5%	<0.1%	0.3%
	Medical Waste	<0.1%	0.2%	<0.1%	<0.1%
	Aerosol Cans (Not Empty)	<0.1%	0.2%	<0.1%	<0.1%
	Non-Recyclable Paper	0.5%	0.6%	0.3%	0.7%
	Non-Recyclable Plastic	0.3%	0.8%	<0.1%	0.6%
	Non-Recyclable Glass	0.2%	0.5%	<0.1%	0.4%
	Non-Recyclable Metal	0.8%	2.5%	<0.1%	1.6%
	Refuse	2.2%	3.9%	0.9%	3.5%
	Total	**6.4%**	**4.3%**		
	Total of Overall Waste	**100%**			

Organic Material Composition – Detailed Overall

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Aseptic, Gable Top, & Tetra Pak Containers	3.1%	9.7%	<0.1%	8.1%
	Non-Compostable Paper	29.0%	33.5%	11.6%	46.4%
	Recyclable Paper	15.7%	29.9%	0.2%	31.3%
	Total	**47.8%**	**16.1%**		
Plastics					
	Plastics that do not meet ASTM	<0.1%	0.2%	<0.1%	<0.1%
	Plastics Wraps, Films, & Pouches	7.1%	4.3%	4.8%	9.3%
	Garbage Bags	0.3%	0.6%	<0.1%	0.6%
	Polystyrene	<0.1%	0.0%	<0.1%	<0.1%
	Non-Recyclable Plastics	3.3%	0.4%	3.1%	3.6%
	Recyclable Plastics	4.9%	8.4%	0.6%	9.3%
	Total	**15.7%**	**10.1%**		
Metals					
	Non-Recyclable Metals	<0.1%	0.0%	<0.1%	<0.1%
	Recyclable Metals	0.3%	0.7%	<0.1%	0.7%
	Total	**0.3%**	**0.7%**		
Glass					
	Non-Recyclable Glass	<0.1%	0.0%	<0.1%	<0.1%
	Recyclable Glass	8.2%	15.2%	0.2%	16.1%
	Total	**8.2%**	**15.2%**		
Miscellaneous Contamination					
	Animal Waste	<0.1%	0.0%	<0.1%	<0.1%
	Diapers & Sanitary Products	<0.1%	0.0%	<0.1%	<0.1%
	Woody Materials	<0.1%	0.0%	<0.1%	<0.1%
	Rocks, Soil, Sand	9.6%	19.2%	<0.1%	19.6%
	Electronics	3.9%	1.2%	3.3%	4.5%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Hazardous Waste	<0.1%	0.0%	<0.1%	<0.1%
	Medical Waste	<0.1%	0.0%	<0.1%	<0.1%
	Manufactured Products	5.0%	0.2%	4.9%	5.1%
	Refuse & Non-Distinct	0.5%	0.7%	0.1%	0.9%
	Unclassifiable Fines	0.2%	0.4%	<0.1%	0.4%
	C&D Waste	8.8%	14.0%	1.5%	16.1%
	Total	**28.0%**	**26.8%**		
Total of Overall Organics Contamination		**100%**			

Attachment **D**

Route Specific Material Composition Tables & Exhibits

Detailed MSW Material Composition – Monday Route

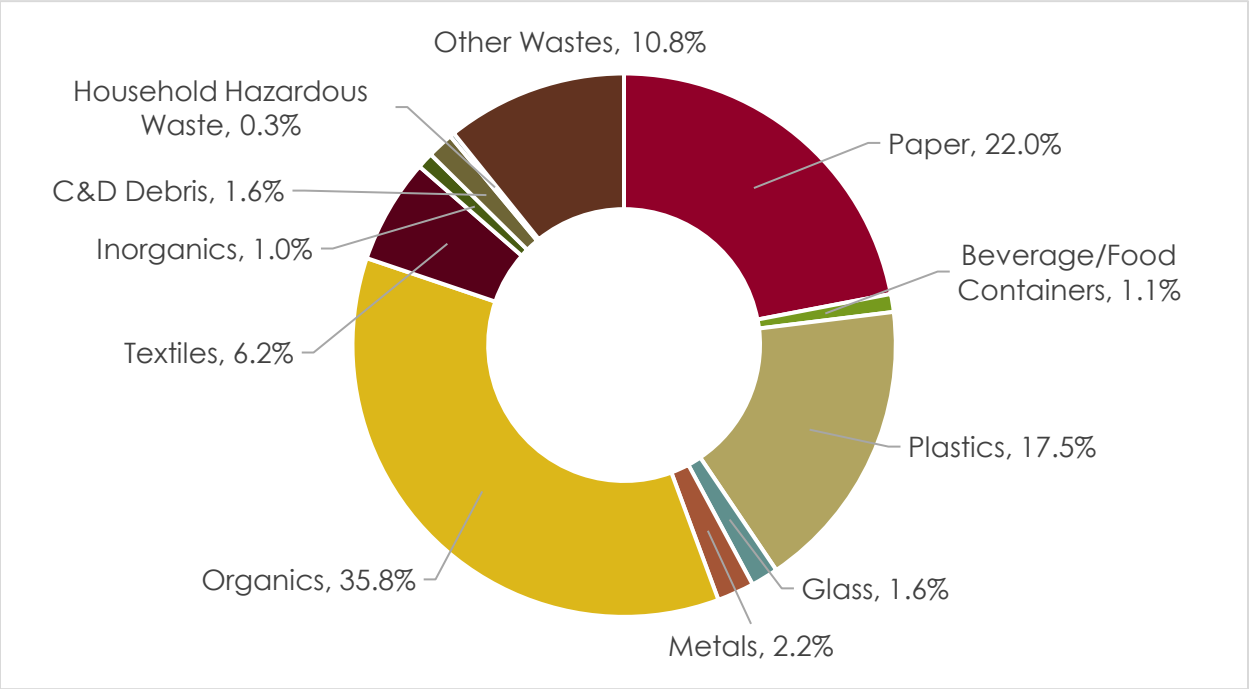
Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Newspaper	0.1%	0.2%	<0.1%	0.3%
	High Grade Office Paper	0.9%	0.2%	0.7%	1.1%
	Magazines/Catalogs	0.9%	0.6%	0.5%	1.3%
	Uncoated OCC/Kraft	2.5%	1.6%	1.3%	3.6%
	Boxboard	2.6%	1.3%	1.6%	3.5%
	Mixed Paper - Recyclable	2.8%	0.9%	2.1%	3.5%
	Compostable Paper	11.4%	2.0%	9.9%	12.8%
	Other Paper	0.9%	0.4%	0.6%	1.1%
	Total	**22.0%**	**4.4%**		
Beverage/Food Containers					
	0.4%	1.1%	2.0%	<0.1%	2.5%
	Total	**1.1%**	**2.0%**		
Plastics					
	#1 PET Bottles/Jars	1.0%	0.4%	0.7%	1.3%
	#1 Other PET Containers & Packaging	0.8%	0.3%	0.6%	1.1%
	#2 HDPE Bottles/Jars - Clear	0.4%	0.2%	0.2%	0.5%
	#2 HDPE Bottles/Jars - Color	0.7%	0.4%	0.4%	1.0%
	#2 Other HDPE Containers & Packaging	<0.1%	<0.1%	<0.1%	<0.1%
	#5 PP Containers	2.2%	1.2%	1.3%	3.1%
	#5 Other PP	0.2%	0.1%	0.2%	0.3%
	#6 Expanded Polystyrene Packaging	0.8%	0.1%	0.7%	0.9%
	#3, #4, #6 (Non-Expanded), and #7 Other	0.5%	0.1%	0.4%	0.6%
	Other Rigid Plastic Products	2.1%	1.0%	1.4%	2.8%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Grocery & Merchandise Bags	1.1%	0.4%	0.8%	1.4%
	Trash Bags	2.3%	0.6%	1.8%	2.8%
	Commercial & Industrial Film	4.3%	1.2%	3.4%	5.2%
	Other Film	0.9%	0.2%	0.8%	1.1%
	Other Plastic	0.1%	0.1%	<0.1%	0.2%
	Total	**17.5%**	**3.7%**		
Glass					
	Recyclable Glass Bottles & Jars	1.6%	1.0%	0.8%	2.3%
	Flat Glass	<0.1%	<0.1%	<0.1%	<0.1%
	Other Glass	<0.1%	0.1%	<0.1%	<0.1%
	Total	**1.6%**	**1.1%**		
Metals					
	Aluminum Beverage Containers	0.4%	0.2%	0.2%	0.5%
	Other Aluminum	0.6%	0.3%	0.3%	0.8%
	HVAC Ducting	<0.1%	<0.1%	<0.1%	<0.1%
	Ferrous Containers (Tin Cans)	0.4%	0.2%	0.2%	0.5%
	Other Ferrous	0.6%	0.4%	0.3%	0.9%
	Other Non-Ferrous	<0.1%	0.1%	<0.1%	<0.1%
	Other Metal	0.2%	0.1%	0.2%	0.3%
	Total	**2.2%**	**0.7%**		
Organics					
	Yard Waste - Compostable	2.0%	1.3%	1.0%	2.9%
	Yard Waste - Woody	0.4%	0.9%	<0.1%	1.1%
	Food Waste - Unpackaged	20.1%	5.6%	15.9%	24.3%
	Food Waste - Packaged	7.6%	3.1%	5.3%	9.9%
	Bottom Fines & Dirt	1.1%	1.5%	<0.1%	2.2%
	Diapers & Sanitary Products	4.0%	0.9%	3.3%	4.6%
	Other Compostable	0.7%	0.7%	0.2%	1.3%
	Total	**35.8%**	**9.2%**		

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Textiles					
	Carpet	<0.1%	<0.1%	<0.1%	<0.1%
	Carpet Padding	<0.1%	<0.1%	<0.1%	<0.1%
	Clothing	2.3%	2.2%	0.7%	3.9%
	Other Textiles	4.0%	2.6%	2.0%	5.9%
	Total	**6.2%**	**4.4%**		
Inorganics					
	Rubber Products	0.2%	0.3%	<0.1%	0.5%
	Syringes/Needles	<0.1%	<0.1%	<0.1%	<0.1%
	Medical & Infectious Waste	<0.1%	<0.1%	<0.1%	<0.1%
	Television	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Monitors	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Equipment/Peripherals	<0.1%	<0.1%	<0.1%	<0.1%
	Electronic Equipment/Peripherals	0.6%	0.5%	0.2%	0.9%
	White Goods - Refrigerated	<0.1%	<0.1%	<0.1%	<0.1%
	White Goods - Not Refrigerated	<0.1%	<0.1%	<0.1%	<0.1%
	Lead-Acid Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Other Household Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Items Containing Lithium Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Lithium Batteries	<0.1%	0.1%	<0.1%	<0.1%
	Tires	<0.1%	<0.1%	<0.1%	<0.1%
	Household Bulk Items	<0.1%	<0.1%	<0.1%	<0.1%
	Fluorescent Lights/Ballasts	<0.1%	<0.1%	<0.1%	<0.1%
	Solar Panels	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**1.0%**	**0.7%**		
C&D Debris					
	C&D Contained in the MSW Loads	<0.1%	<0.1%	<0.1%	<0.1%
	Untreated Wood	<0.1%	0.1%	<0.1%	<0.1%
	Treated Wood	1.5%	1.8%	0.2%	2.8%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Total	**1.6%**	**1.7%**		
Household Hazardous Waste					
	Chemicals (Liquid or Solid)	0.3%	0.4%	<0.1%	0.6%
	Total	**0.3%**	**0.4%**		
Other Wastes					
	Non-Distinct	7.5%	9.4%	0.6%	14.3%
	Unclassifiable Fines	3.3%	1.9%	1.9%	4.7%
	Total	**10.8%**	**9.5%**		
	Total of Overall Waste	**100%**			

MSW Composition – Monday Route



Top Ten Overall MSW Materials – Monday Route

Village of Oak Park MSW – Monday		
#	**Material**	**%**
1	Food Waste - Unpackaged	20.1%
2	Compostable Paper	11.4%
3	Food Waste - Packaged	7.6%
4	Non-Distinct	7.5%
5	Commercial & Industrial Film	4.3%
6	Other Textiles	4.0%
7	Diapers & Sanitary Products	4.0%
8	Unclassifiable Fines	3.3%
9	Mixed Paper - Recyclable	2.8%
10	Boxboard	2.6%
	Cumulative Percent	**67.4%**

Detailed MSW Material Composition – Tuesday Route

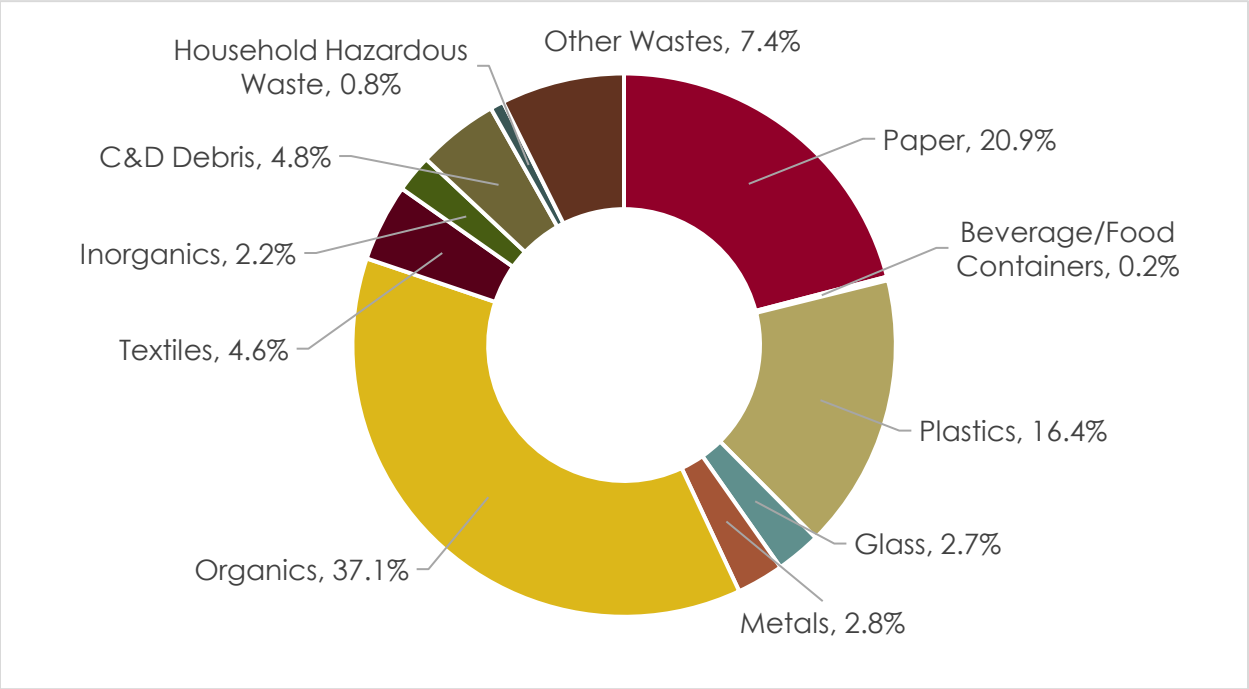
Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Newspaper	0.4%	0.5%	<0.1%	0.8%
	High Grade Office Paper	1.8%	0.9%	1.1%	2.4%
	Magazines/Catalogs	0.4%	0.8%	<0.1%	1.0%
	Uncoated OCC/Kraft	1.4%	1.1%	0.6%	2.2%
	Boxboard	2.2%	0.3%	2.0%	2.4%
	Mixed Paper - Recyclable	6.4%	1.5%	5.2%	7.5%
	Compostable Paper	8.0%	3.5%	5.5%	10.6%
	Other Paper	0.4%	0.3%	0.2%	0.7%
	Total	**20.9%**	**4.4%**		
Beverage/Food Containers					
	0.4%	0.2%	0.2%	<0.1%	0.4%
	Total	**0.2%**	**0.2%**		
Plastics					
	#1 PET Bottles/Jars	0.9%	0.4%	0.6%	1.2%
	#1 Other PET Containers & Packaging	1.1%	0.3%	0.9%	1.3%
	#2 HDPE Bottles/Jars - Clear	0.2%	0.2%	<0.1%	0.3%
	#2 HDPE Bottles/Jars - Color	0.7%	0.5%	0.3%	1.0%
	#2 Other HDPE Containers & Packaging	<0.1%	0.1%	<0.1%	<0.1%
	#5 PP Containers	1.3%	0.6%	0.9%	1.8%
	#5 Other PP	0.3%	0.1%	0.2%	0.3%
	#6 Expanded Polystyrene Packaging	0.9%	0.4%	0.6%	1.2%
	#3, #4, #6 (Non-Expanded), and #7 Other	0.7%	0.6%	0.3%	1.1%
	Other Rigid Plastic Products	1.8%	0.7%	1.3%	2.3%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Grocery & Merchandise Bags	0.9%	0.3%	0.7%	1.2%
	Trash Bags	2.2%	0.6%	1.8%	2.6%
	Commercial & Industrial Film	1.8%	0.4%	1.6%	2.1%
	Other Film	3.3%	0.5%	2.9%	3.7%
	Other Plastic	0.2%	0.1%	0.2%	0.3%
	Total	**16.4%**	**1.9%**		
Glass					
	Recyclable Glass Bottles & Jars	2.2%	1.1%	1.5%	3.0%
	Flat Glass	<0.1%	0.1%	<0.1%	<0.1%
	Other Glass	0.4%	0.3%	0.2%	0.7%
	Total	**2.7%**	**1.1%**		
Metals					
	Aluminum Beverage Containers	0.5%	0.4%	0.2%	0.8%
	Other Aluminum	0.7%	0.2%	0.6%	0.9%
	HVAC Ducting	<0.1%	<0.1%	<0.1%	<0.1%
	Ferrous Containers (Tin Cans)	0.4%	0.2%	0.2%	0.6%
	Other Ferrous	0.8%	0.5%	0.4%	1.2%
	Other Non-Ferrous	0.2%	0.1%	0.1%	0.2%
	Other Metal	0.2%	0.1%	0.1%	0.3%
	Total	**2.8%**	**0.8%**		
Organics					
	Yard Waste - Compostable	4.0%	4.7%	0.6%	7.5%
	Yard Waste - Woody	0.9%	1.1%	0.1%	1.7%
	Food Waste - Unpackaged	21.3%	4.1%	18.2%	24.3%
	Food Waste - Packaged	3.8%	2.0%	2.4%	5.2%
	Bottom Fines & Dirt	<0.1%	<0.1%	<0.1%	<0.1%
	Diapers & Sanitary Products	5.5%	3.1%	3.2%	7.8%
	Other Compostable	1.6%	1.6%	0.4%	2.8%
	Total	**37.1%**	**8.5%**		

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Textiles					
	Carpet	<0.1%	<0.1%	<0.1%	<0.1%
	Carpet Padding	<0.1%	<0.1%	<0.1%	<0.1%
	Clothing	1.6%	0.6%	1.1%	2.0%
	Other Textiles	3.0%	1.6%	1.9%	4.2%
	Total	**4.6%**	**1.4%**		
Inorganics					
	Rubber Products	0.6%	0.9%	<0.1%	1.2%
	Syringes/Needles	<0.1%	<0.1%	<0.1%	<0.1%
	Medical & Infectious Waste	0.3%	0.3%	0.1%	0.6%
	Television	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Monitors	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Equipment/Peripherals	<0.1%	<0.1%	<0.1%	<0.1%
	Electronic Equipment/Peripherals	1.1%	0.9%	0.5%	1.8%
	White Goods - Refrigerated	<0.1%	<0.1%	<0.1%	<0.1%
	White Goods - Not Refrigerated	<0.1%	<0.1%	<0.1%	<0.1%
	Lead-Acid Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Other Household Batteries	<0.1%	0.1%	<0.1%	<0.1%
	Items Containing Lithium Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Lithium Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Tires	<0.1%	<0.1%	<0.1%	<0.1%
	Household Bulk Items	<0.1%	<0.1%	<0.1%	<0.1%
	Fluorescent Lights/Ballasts	<0.1%	0.2%	<0.1%	<0.1%
	Solar Panels	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**2.2%**	**1.0%**		
C&D Debris					
	C&D Contained in the MSW Loads	1.2%	2.3%	<0.1%	2.8%
	Untreated Wood	0.7%	0.7%	0.2%	1.2%
	Treated Wood	2.9%	2.8%	0.9%	5.0%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Total	**4.8%**	**3.5%**		
Household Hazardous Waste					
	Chemicals (Liquid or Solid)	0.8%	1.2%	<0.1%	1.7%
	Total	**0.8%**	**1.2%**		
Other Wastes					
	Non-Distinct	2.6%	2.3%	0.9%	4.3%
	Unclassifiable Fines	4.8%	1.8%	3.5%	6.1%
	Total	**7.4%**	**3.7%**		
	Total of Overall Waste	**100%**			

MSW Composition – Tuesday Route



Top Ten Overall MSW Materials – Tuesday Route

Village of Oak Park MSW – Tuesday		
#	**Material**	**%**
1	Food Waste - Unpackaged	21.3%
2	Compostable Paper	8.0%
3	Mixed Paper - Recyclable	6.4%
4	Diapers & Sanitary Products	5.5%
5	Unclassifiable Fines	4.8%
6	Yard Waste - Compostable	4.0%
7	Food Waste - Packaged	3.8%
8	Other Film	3.3%
9	Other Textiles	3.0%
10	Treated Wood	2.9%
	Cumulative Percent	**63.0%**

Detailed MSW Material Composition – Wednesday Route

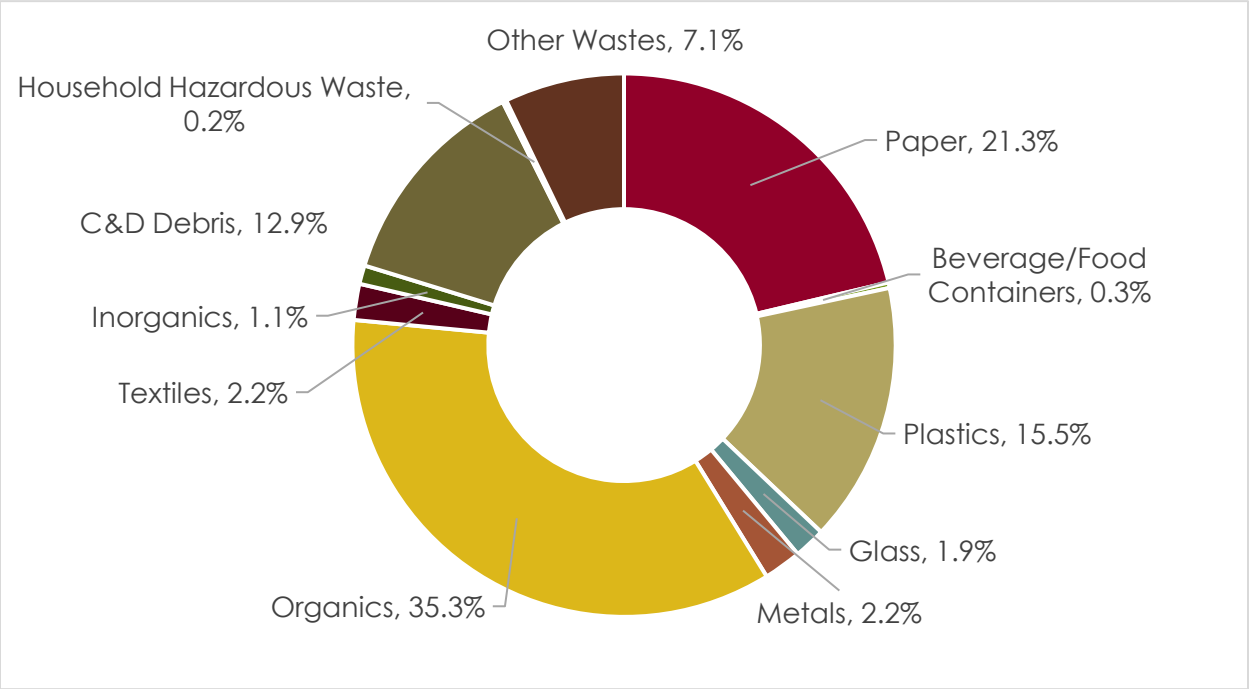
Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Newspaper	0.1%	0.1%	<0.1%	0.2%
	High Grade Office Paper	1.8%	1.7%	0.5%	3.1%
	Magazines/Catalogs	0.7%	1.4%	<0.1%	1.7%
	Uncoated OCC/Kraft	2.6%	2.4%	0.8%	4.3%
	Boxboard	2.4%	0.8%	1.8%	3.0%
	Mixed Paper - Recyclable	5.5%	1.3%	4.6%	6.5%
	Compostable Paper	7.9%	2.4%	6.1%	9.7%
	Other Paper	0.2%	0.3%	<0.1%	0.4%
	Total	**21.3%**	**6.2%**		
Beverage/Food Containers					
	0.4%	0.3%	0.2%	0.2%	0.4%
	Total	**0.3%**	**0.2%**		
Plastics					
	#1 PET Bottles/Jars	1.2%	0.6%	0.7%	1.6%
	#1 Other PET Containers & Packaging	0.8%	0.3%	0.6%	1.1%
	#2 HDPE Bottles/Jars - Clear	0.2%	0.2%	0.1%	0.4%
	#2 HDPE Bottles/Jars - Color	0.5%	0.2%	0.4%	0.6%
	#2 Other HDPE Containers & Packaging	<0.1%	0.2%	<0.1%	<0.1%
	#5 PP Containers	0.7%	0.5%	0.3%	1.1%
	#5 Other PP	0.4%	0.1%	0.3%	0.4%
	#6 Expanded Polystyrene Packaging	0.7%	0.5%	0.4%	1.1%
	#3, #4, #6 (Non-Expanded), and #7 Other	0.8%	0.5%	0.5%	1.2%
	Other Rigid Plastic Products	2.7%	1.9%	1.2%	4.1%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Grocery & Merchandise Bags	1.0%	0.2%	0.8%	1.2%
	Trash Bags	1.5%	0.3%	1.3%	1.7%
	Commercial & Industrial Film	1.9%	0.5%	1.6%	2.3%
	Other Film	2.7%	1.3%	1.7%	3.6%
	Other Plastic	0.2%	0.2%	<0.1%	0.4%
	Total	**15.5%**	**5.1%**		
Glass					
	Recyclable Glass Bottles & Jars	1.3%	0.8%	0.7%	1.9%
	Flat Glass	<0.1%	<0.1%	<0.1%	<0.1%
	Other Glass	0.6%	0.5%	0.2%	1.0%
	Total	**1.9%**	**0.8%**		
Metals					
	Aluminum Beverage Containers	0.4%	0.3%	0.1%	0.6%
	Other Aluminum	0.4%	0.2%	0.2%	0.5%
	HVAC Ducting	<0.1%	<0.1%	<0.1%	<0.1%
	Ferrous Containers (Tin Cans)	0.3%	0.2%	0.2%	0.5%
	Other Ferrous	0.7%	0.7%	0.2%	1.2%
	Other Non-Ferrous	<0.1%	0.1%	<0.1%	<0.1%
	Other Metal	0.4%	0.5%	<0.1%	0.7%
	Total	**2.2%**	**1.5%**		
Organics					
	Yard Waste - Compostable	8.3%	7.3%	2.9%	13.7%
	Yard Waste - Woody	<0.1%	0.1%	<0.1%	<0.1%
	Food Waste - Unpackaged	15.9%	2.3%	14.2%	17.6%
	Food Waste - Packaged	3.5%	1.6%	2.3%	4.6%
	Bottom Fines & Dirt	<0.1%	<0.1%	<0.1%	<0.1%
	Diapers & Sanitary Products	2.7%	2.1%	1.2%	4.3%
	Other Compostable	4.8%	4.7%	1.3%	8.2%
	Total	**35.3%**	**11.1%**		

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Textiles					
	Carpet	<0.1%	<0.1%	<0.1%	<0.1%
	Carpet Padding	<0.1%	<0.1%	<0.1%	<0.1%
	Clothing	0.5%	0.7%	<0.1%	1.0%
	Other Textiles	1.6%	1.1%	0.8%	2.4%
	Total	**2.2%**	**1.1%**		
Inorganics					
	Rubber Products	0.3%	0.1%	0.2%	0.4%
	Syringes/Needles	<0.1%	<0.1%	<0.1%	<0.1%
	Medical & Infectious Waste	<0.1%	0.1%	<0.1%	<0.1%
	Television	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Monitors	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Equipment/Peripherals	<0.1%	<0.1%	<0.1%	<0.1%
	Electronic Equipment/Peripherals	0.3%	0.3%	<0.1%	0.5%
	White Goods - Refrigerated	0.2%	0.5%	<0.1%	0.6%
	White Goods - Not Refrigerated	<0.1%	<0.1%	<0.1%	<0.1%
	Lead-Acid Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Other Household Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Items Containing Lithium Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Lithium Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Tires	<0.1%	<0.1%	<0.1%	<0.1%
	Household Bulk Items	<0.1%	<0.1%	<0.1%	<0.1%
	Fluorescent Lights/Ballasts	<0.1%	<0.1%	<0.1%	<0.1%
	Solar Panels	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**1.1%**	**0.5%**		
C&D Debris					
	C&D Contained in the MSW Loads	2.9%	5.1%	<0.1%	6.7%
	Untreated Wood	5.9%	11.9%	<0.1%	14.6%
	Treated Wood	4.1%	2.8%	2.0%	6.1%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Total	**12.9%**	**13.2%**		
Household Hazardous Waste					
	Chemicals (Liquid or Solid)	0.2%	0.4%	<0.1%	0.5%
	Total	**0.2%**	**0.4%**		
Other Wastes					
	Non-Distinct	2.9%	2.9%	0.8%	5.0%
	Unclassifiable Fines	4.3%	1.3%	3.3%	5.2%
	Total	**7.1%**	**2.8%**		
	Total of Overall Waste	**100%**			

MSW Composition – Wednesday Route



Top Ten Overall MSW Materials – Wednesday Route

Village of Oak Park MSW – Wednesday		
#	**Material**	**%**
1	Food Waste - Unpackaged	15.9%
2	Yard Waste - Compostable	8.3%
3	Compostable Paper	7.9%
4	Untreated Wood	5.9%
5	Mixed Paper - Recyclable	5.5%
6	Other Compostable	4.8%
7	Unclassifiable Fines	4.3%
8	Treated Wood	4.1%
9	Food Waste - Packaged	3.5%
10	C&D Contained in the MSW Loads	2.9%
	Cumulative Percent	**63.0%**

Detailed MSW Material Composition – Thursday Route

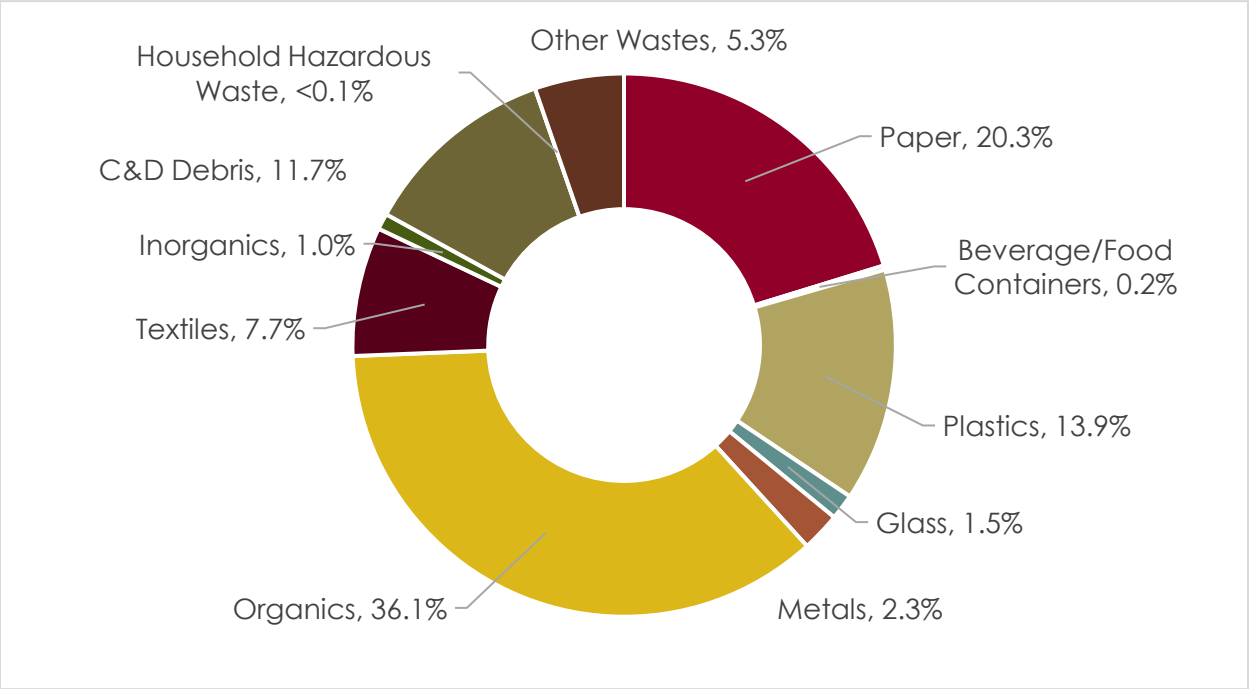
Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Newspaper	0.2%	0.3%	<0.1%	0.5%
	High Grade Office Paper	0.8%	0.4%	0.5%	1.0%
	Magazines/Catalogs	1.4%	2.3%	<0.1%	3.1%
	Uncoated OCC/Kraft	1.9%	1.1%	1.1%	2.7%
	Boxboard	2.0%	1.0%	1.3%	2.7%
	Mixed Paper - Recyclable	6.1%	1.2%	5.1%	7.0%
	Compostable Paper	7.9%	1.9%	6.5%	9.2%
	Other Paper	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**20.3%**	**4.4%**		
Beverage/Food Containers					
	0.4%	0.2%	0.1%	0.2%	0.3%
	Total	**0.2%**	**0.1%**		
Plastics					
	#1 PET Bottles/Jars	0.9%	0.2%	0.8%	1.1%
	#1 Other PET Containers & Packaging	0.8%	0.3%	0.5%	1.0%
	#2 HDPE Bottles/Jars - Clear	0.1%	0.1%	<0.1%	0.2%
	#2 HDPE Bottles/Jars - Color	0.4%	0.2%	0.3%	0.5%
	#2 Other HDPE Containers & Packaging	<0.1%	0.1%	<0.1%	<0.1%
	#5 PP Containers	1.0%	0.3%	0.7%	1.2%
	#5 Other PP	0.3%	0.2%	0.2%	0.4%
	#6 Expanded Polystyrene Packaging	0.6%	0.1%	0.5%	0.7%
	#3, #4, #6 (Non-Expanded), and #7 Other	0.6%	0.2%	0.4%	0.7%
	Other Rigid Plastic Products	1.4%	0.6%	1.0%	1.9%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Grocery & Merchandise Bags	0.7%	0.1%	0.6%	0.8%
	Trash Bags	2.0%	0.4%	1.7%	2.4%
	Commercial & Industrial Film	2.0%	0.5%	1.6%	2.4%
	Other Film	2.8%	1.0%	2.0%	3.5%
	Other Plastic	0.2%	0.1%	0.1%	0.3%
	Total	**13.9%**	**2.6%**		
Glass					
	Recyclable Glass Bottles & Jars	1.1%	1.2%	0.3%	2.0%
	Flat Glass	<0.1%	<0.1%	<0.1%	<0.1%
	Other Glass	0.4%	0.4%	<0.1%	0.7%
	Total	**1.5%**	**1.1%**		
Metals					
	Aluminum Beverage Containers	0.4%	0.3%	0.2%	0.6%
	Other Aluminum	0.2%	0.1%	0.2%	0.3%
	HVAC Ducting	<0.1%	<0.1%	<0.1%	<0.1%
	Ferrous Containers (Tin Cans)	0.6%	0.2%	0.4%	0.7%
	Other Ferrous	0.7%	0.5%	0.3%	1.1%
	Other Non-Ferrous	0.3%	0.6%	<0.1%	0.7%
	Other Metal	0.1%	0.1%	<0.1%	0.2%
	Total	**2.3%**	**0.8%**		
Organics					
	Yard Waste - Compostable	3.4%	4.0%	0.4%	6.3%
	Yard Waste - Woody	3.6%	6.9%	<0.1%	8.7%
	Food Waste - Unpackaged	19.2%	2.8%	17.2%	21.3%
	Food Waste - Packaged	4.3%	2.2%	2.7%	5.9%
	Bottom Fines & Dirt	<0.1%	<0.1%	<0.1%	<0.1%
	Diapers & Sanitary Products	2.2%	3.0%	<0.1%	4.4%
	Other Compostable	3.4%	3.4%	1.0%	5.9%
	Total	**36.1%**	**9.1%**		

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Textiles					
	Carpet	<0.1%	<0.1%	<0.1%	<0.1%
	Carpet Padding	1.7%	3.9%	<0.1%	4.6%
	Clothing	1.6%	0.5%	1.3%	1.9%
	Other Textiles	4.4%	3.5%	1.8%	7.0%
	Total	**7.7%**	**3.2%**		
Inorganics					
	Rubber Products	0.2%	0.1%	<0.1%	0.3%
	Syringes/Needles	<0.1%	<0.1%	<0.1%	<0.1%
	Medical & Infectious Waste	<0.1%	0.1%	<0.1%	<0.1%
	Television	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Monitors	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Equipment/Peripherals	<0.1%	0.1%	<0.1%	<0.1%
	Electronic Equipment/Peripherals	0.5%	0.5%	0.2%	0.9%
	White Goods - Refrigerated	<0.1%	<0.1%	<0.1%	<0.1%
	White Goods - Not Refrigerated	<0.1%	<0.1%	<0.1%	<0.1%
	Lead-Acid Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Other Household Batteries	<0.1%	0.1%	<0.1%	<0.1%
	Items Containing Lithium Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Lithium Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Tires	<0.1%	<0.1%	<0.1%	<0.1%
	Household Bulk Items	<0.1%	<0.1%	<0.1%	<0.1%
	Fluorescent Lights/Ballasts	<0.1%	0.1%	<0.1%	<0.1%
	Solar Panels	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**1.0%**	**0.6%**		
C&D Debris					
	C&D Contained in the MSW Loads	1.7%	3.0%	<0.1%	3.9%
	Untreated Wood	2.0%	1.7%	0.7%	3.2%
	Treated Wood	8.0%	4.6%	4.6%	11.4%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Total	**11.7%**	**6.5%**		
Household Hazardous Waste					
	Chemicals (Liquid or Solid)	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**<0.1%**	**<0.1%**		
Other Wastes					
	Non-Distinct	1.4%	1.2%	0.5%	2.3%
	Unclassifiable Fines	3.9%	2.2%	2.4%	5.5%
	Total	**5.3%**	**2.1%**		
	Total of Overall Waste	**100%**			

MSW Composition – Thursday Route



Top Ten Overall MSW Materials – Thursday Route

Village of Oak Park MSW – Thursday		
#	**Material**	**%**
1	Food Waste - Unpackaged	19.2%
2	Treated Wood	8.0%
3	Compostable Paper	7.9%
4	Mixed Paper - Recyclable	6.1%
5	Other Textiles	4.4%
6	Food Waste - Packaged	4.3%
7	Unclassifiable Fines	3.9%
8	Yard Waste - Woody	3.6%
9	Other Compostable	3.4%
10	Yard Waste - Compostable	3.4%
	Cumulative Percent	**64.2%**

Detailed MSW Material Composition – Friday Route

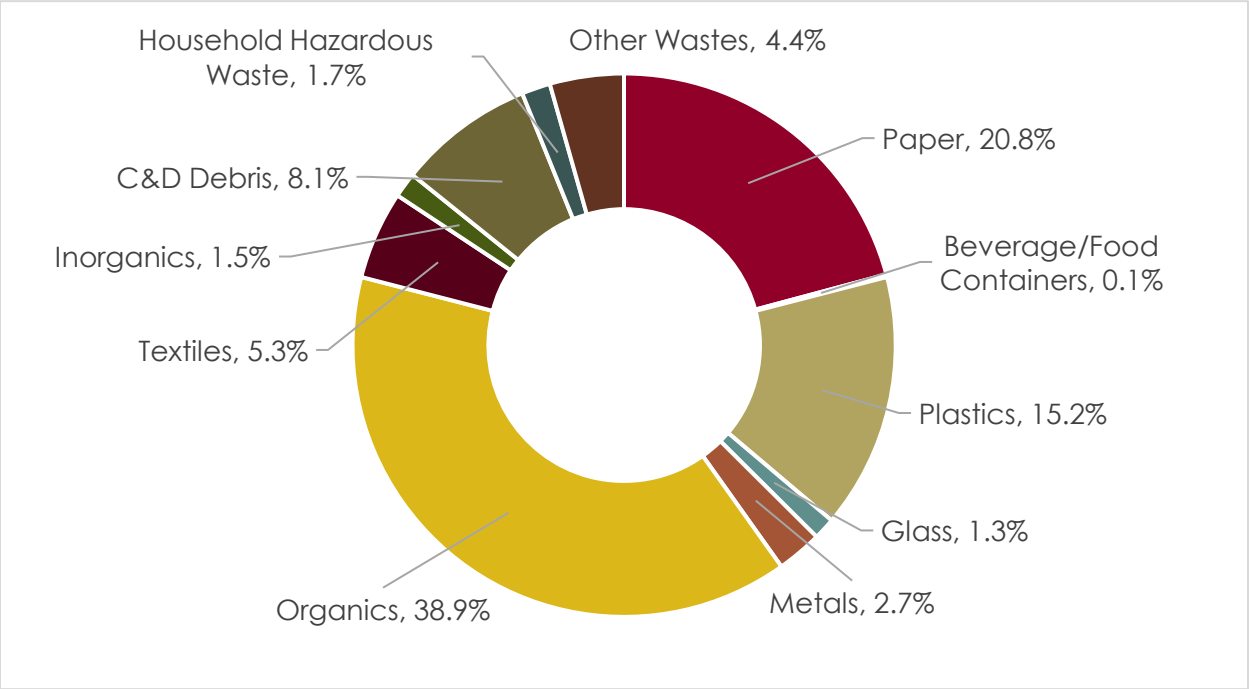
Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Newspaper	0.8%	0.9%	0.1%	1.4%
	High Grade Office Paper	0.8%	1.0%	0.1%	1.6%
	Magazines/Catalogs	0.2%	0.5%	<0.1%	0.6%
	Uncoated OCC/Kraft	3.6%	3.1%	1.3%	5.9%
	Boxboard	2.4%	0.6%	1.9%	2.8%
	Mixed Paper - Recyclable	5.0%	0.7%	4.5%	5.5%
	Compostable Paper	7.9%	2.0%	6.5%	9.4%
	Other Paper	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**20.8%**	**3.6%**		
Beverage/Food Containers					
	0.4%	0.1%	0.1%	<0.1%	0.2%
	Total	**0.1%**	**0.1%**		
Plastics					
	#1 PET Bottles/Jars	0.9%	0.3%	0.7%	1.2%
	#1 Other PET Containers & Packaging	0.7%	0.3%	0.5%	0.9%
	#2 HDPE Bottles/Jars - Clear	0.3%	0.4%	<0.1%	0.7%
	#2 HDPE Bottles/Jars - Color	0.3%	0.2%	0.2%	0.4%
	#2 Other HDPE Containers & Packaging	<0.1%	0.1%	<0.1%	<0.1%
	#5 PP Containers	0.7%	0.4%	0.5%	1.0%
	#5 Other PP	0.2%	<0.1%	0.2%	0.2%
	#6 Expanded Polystyrene Packaging	0.8%	0.1%	0.7%	0.9%
	#3, #4, #6 (Non-Expanded), and #7 Other	0.4%	0.1%	0.3%	0.4%
	Other Rigid Plastic Products	3.5%	3.8%	0.7%	6.3%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Grocery & Merchandise Bags	0.7%	0.2%	0.6%	0.8%
	Trash Bags	1.6%	0.4%	1.3%	1.8%
	Commercial & Industrial Film	1.7%	0.3%	1.5%	1.9%
	Other Film	3.0%	1.2%	2.1%	3.8%
	Other Plastic	0.4%	0.2%	0.2%	0.5%
	Total	**15.2%**	**4.3%**		
Glass					
	Recyclable Glass Bottles & Jars	1.1%	0.6%	0.6%	1.5%
	Flat Glass	<0.1%	<0.1%	<0.1%	<0.1%
	Other Glass	0.2%	0.2%	<0.1%	0.3%
	Total	**1.3%**	**0.7%**		
Metals					
	Aluminum Beverage Containers	0.4%	0.2%	0.3%	0.5%
	Other Aluminum	0.4%	0.1%	0.4%	0.5%
	HVAC Ducting	<0.1%	<0.1%	<0.1%	<0.1%
	Ferrous Containers (Tin Cans)	0.3%	0.1%	0.2%	0.3%
	Other Ferrous	1.0%	0.7%	0.5%	1.5%
	Other Non-Ferrous	0.4%	0.5%	<0.1%	0.7%
	Other Metal	0.3%	0.2%	0.1%	0.5%
	Total	**2.7%**	**0.4%**		
Organics					
	Yard Waste - Compostable	1.3%	1.8%	<0.1%	2.7%
	Yard Waste - Woody	0.3%	0.5%	<0.1%	0.6%
	Food Waste - Unpackaged	16.7%	8.0%	10.9%	22.6%
	Food Waste - Packaged	4.3%	2.0%	2.8%	5.8%
	Bottom Fines & Dirt	3.1%	7.0%	<0.1%	8.3%
	Diapers & Sanitary Products	6.3%	1.9%	4.9%	7.7%
	Other Compostable	6.7%	6.5%	1.9%	11.6%
	Total	**38.9%**	**6.6%**		

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Textiles					
	Carpet	<0.1%	<0.1%	<0.1%	<0.1%
	Carpet Padding	<0.1%	<0.1%	<0.1%	<0.1%
	Clothing	2.7%	4.3%	<0.1%	5.9%
	Other Textiles	2.6%	1.9%	1.2%	4.0%
	Total	**5.3%**	**4.7%**		
Inorganics					
	Rubber Products	0.5%	0.7%	<0.1%	1.0%
	Syringes/Needles	<0.1%	<0.1%	<0.1%	<0.1%
	Medical & Infectious Waste	<0.1%	0.2%	<0.1%	<0.1%
	Television	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Monitors	<0.1%	<0.1%	<0.1%	<0.1%
	Computer Equipment/Peripherals	<0.1%	<0.1%	<0.1%	<0.1%
	Electronic Equipment/Peripherals	0.8%	1.1%	<0.1%	1.6%
	White Goods - Refrigerated	<0.1%	<0.1%	<0.1%	<0.1%
	White Goods - Not Refrigerated	<0.1%	<0.1%	<0.1%	<0.1%
	Lead-Acid Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Other Household Batteries	0.1%	0.1%	<0.1%	0.2%
	Items Containing Lithium Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Lithium Batteries	<0.1%	<0.1%	<0.1%	<0.1%
	Tires	<0.1%	<0.1%	<0.1%	<0.1%
	Household Bulk Items	<0.1%	<0.1%	<0.1%	<0.1%
	Fluorescent Lights/Ballasts	<0.1%	<0.1%	<0.1%	<0.1%
	Solar Panels	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**1.5%**	**1.1%**		
C&D Debris					
	C&D Contained in the MSW Loads	3.6%	4.9%	<0.1%	7.3%
	Untreated Wood	0.9%	1.1%	0.1%	1.8%
	Treated Wood	3.5%	3.2%	1.2%	5.8%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Total	**8.1%**	**6.0%**		
Household Hazardous Waste					
	Chemicals (Liquid or Solid)	1.7%	2.8%	<0.1%	3.8%
	Total	**1.7%**	**2.8%**		
Other Wastes					
	Non-Distinct	2.0%	2.6%	<0.1%	4.0%
	Unclassifiable Fines	2.4%	1.7%	1.1%	3.7%
	Total	**4.4%**	**2.4%**		
	Total of Overall Waste	**100%**			

MSW Composition – Friday Route



Top Ten Overall MSW Materials – Friday Route

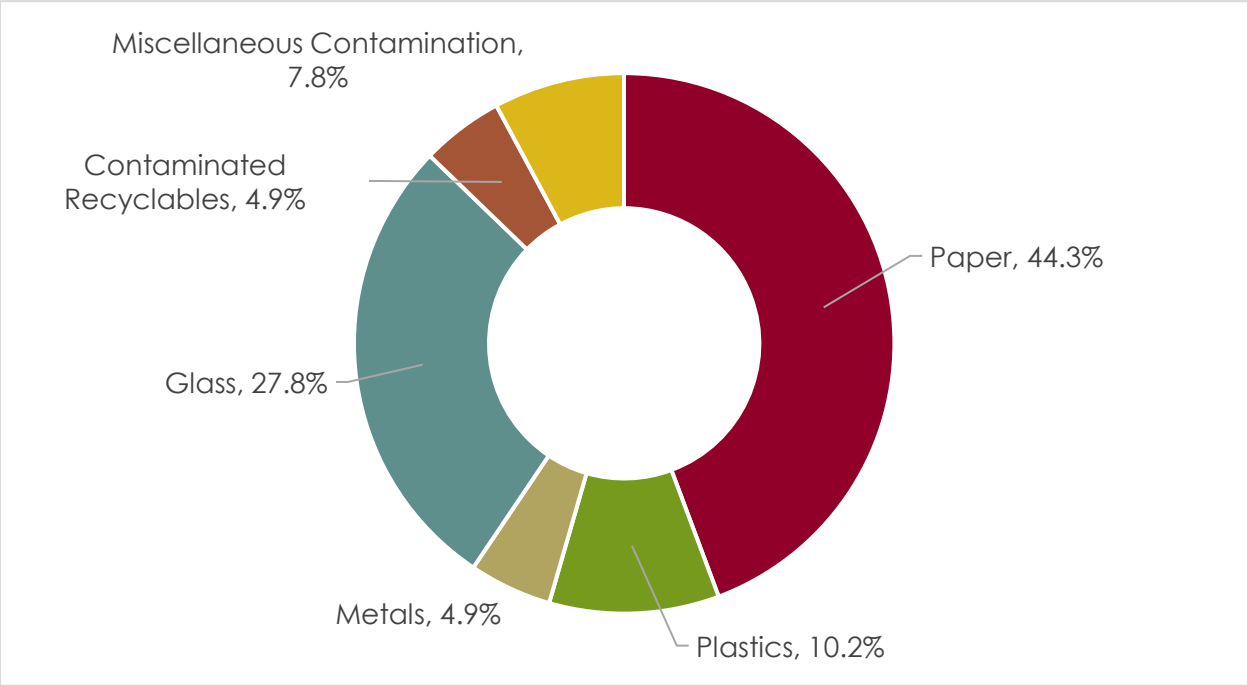
Village of Oak Park MSW – Friday		
#	**Material**	**%**
1	Food Waste - Unpackaged	16.7%
2	Compostable Paper	7.9%
3	Other Compostable	6.7%
4	Diapers & Sanitary Products	6.3%
5	Mixed Paper - Recyclable	5.0%
6	Food Waste - Packaged	4.3%
7	Uncoated OCC/Kraft	3.6%
8	C&D Contained in the MSW Loads	3.6%
9	Treated Wood	3.5%
10	Other Rigid Plastic Products	3.5%
	Cumulative Percent	**61.3%**

Detailed Recycling Material Composition – Monday Route

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Paper				
	Uncoated OCC	24.0%	13.5%	14.1%	33.9%
	Chipboard & Kraft Paper	8.8%	2.1%	7.3%	10.3%
	Newspaper	0.8%	0.7%	0.2%	1.3%
	Mixed Paper	9.3%	2.2%	7.7%	11.0%
	White Office Paper	1.4%	1.3%	0.4%	2.4%
	Aseptic, Gable Top & Tetra Pak Containers	0.8%	1.5%	<0.1%	1.9%
	Total	**45.1%**	**12.2%**		
	Plastics				
	#1 PET	6.1%	1.5%	5.0%	7.2%
	#2 HDPE	2.7%	1.1%	1.9%	3.5%
	#3 PVC	<0.1%	0.0%	<0.1%	<0.1%
	#4 LDPE	<0.1%	0.0%	<0.1%	<0.1%
	#5 PP Containers	1.2%	0.7%	0.6%	1.7%
	#7 Other	0.3%	0.6%	<0.1%	0.7%
	Total	**10.2%**	**2.5%**		
	Metals				
	Aluminum Containers	2.3%	1.4%	1.2%	3.3%
	Aluminum Foil & Formed Containers	0.7%	1.3%	<0.1%	1.6%
	Steel/Tin Containers	1.9%	0.4%	1.6%	2.2%
	Aerosol Cans (Empty)	<0.1%	0.2%	<0.1%	<0.1%
	Paint Cans (Empty)	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**4.9%**	**0.9%**		
	Glass				
	Glass Bottles & Jars (All Colors)	27.8%	10.4%	20.1%	35.5%
	Total	**27.8%**	**10.4%**		
	Contaminated Recyclables				
	Contaminated Corrugated Cardboard	1.4%	2.9%	<0.1%	3.6%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Other Contaminated Paper	0.8%	0.5%	0.5%	1.2%
	Contaminated #1 PET	0.5%	0.6%	<0.1%	1.0%
	Contaminated #2 HDPE	0.3%	0.8%	<0.1%	0.9%
	Contaminated #5 PP	0.1%	0.1%	<0.1%	0.2%
	Other Contaminated Plastic	<0.1%	0.1%	<0.1%	<0.1%
	Contaminated Metal Foil & Formed Containers	<0.1%	0.0%	<0.1%	<0.1%
	Other Contaminated Metals	1.4%	2.8%	<0.1%	3.5%
	Contaminated Glass	0.3%	0.6%	<0.1%	0.7%
	Total	**4.9%**	**3.9%**		
Miscellaneous Contamination					
	Organic Waste	0.2%	0.2%	<0.1%	0.3%
	Plastic Bags & Film	0.8%	0.5%	0.4%	1.2%
	Polystyrene	0.4%	0.3%	0.2%	0.7%
	Rope & String-Like Products	<0.1%	0.0%	<0.1%	<0.1%
	Electronics	0.5%	1.0%	<0.1%	1.3%
	Hazardous Waste	<0.1%	0.0%	<0.1%	<0.1%
	Propane Tanks	<0.1%	0.0%	<0.1%	<0.1%
	Manufactured Products	<0.1%	0.0%	<0.1%	<0.1%
	Medical Waste	<0.1%	0.0%	<0.1%	<0.1%
	Aerosol Cans (Not Empty)	0.1%	0.3%	<0.1%	0.4%
	Non-Recyclable Paper	0.9%	0.9%	0.2%	1.5%
	Non-Recyclable Plastic	1.7%	0.8%	1.1%	2.3%
	Non-Recyclable Glass	0.4%	0.8%	<0.1%	1.0%
	Non-Recyclable Metal	0.3%	0.5%	<0.1%	0.7%
	Refuse	1.8%	2.3%	<0.1%	3.4%
	Total	**7.0%**	**2.5%**		
	Total of Overall	**100%**			

Recycling Composition – Monday Route



Top Ten Recycling Materials – Monday Route

Village of Oak Park Recycling – Monday		
#	**Material**	**%**
1	Glass Bottles & Jars (All Colors)	27.8%
2	Uncoated OCC	24.0%
3	Mixed Paper	9.3%
4	Chipboard & Kraft Paper	8.8%
5	#1 PET	6.1%
6	#2 HDPE	2.7%
7	Aluminum Containers	2.3%
8	Steel/Tin Containers	1.9%
9	Refuse	1.8%
10	Non-Recyclable Plastic	1.7%
	Cumulative Percent	**86.3%**

Top Ten Recycling Materials Contamination – Monday Route

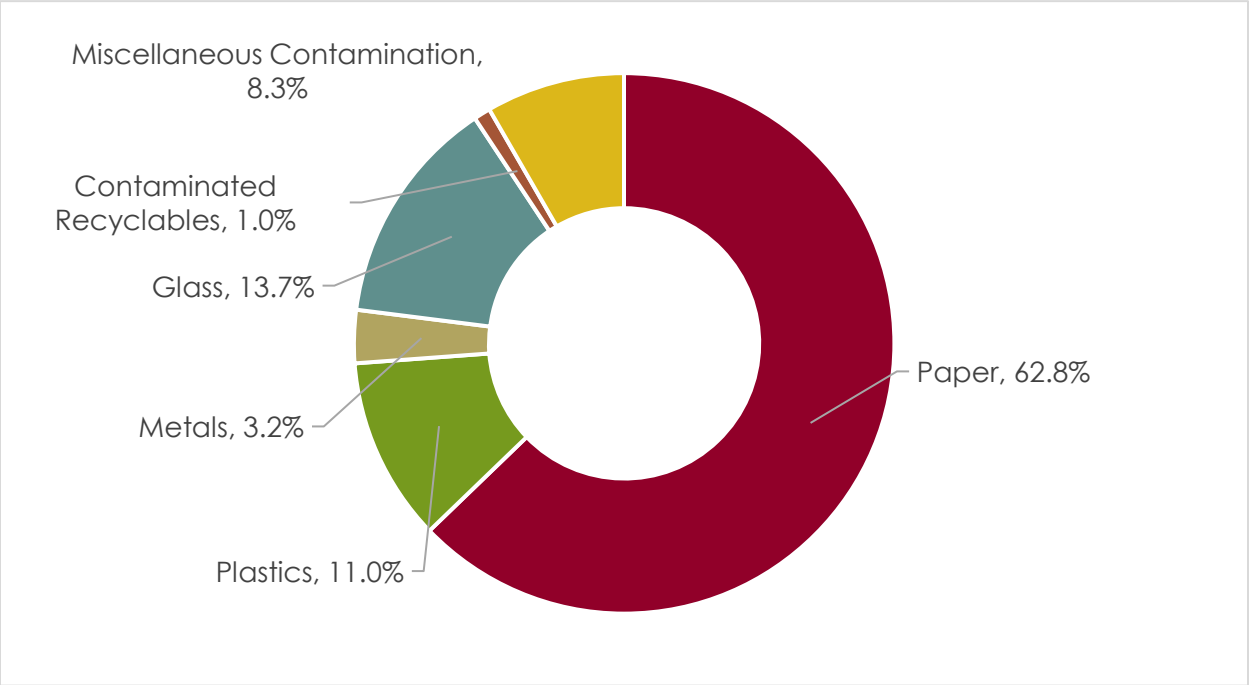
Village of Oak Park Recycling – Monday		
#	**Contaminant**	**%**
1	Refuse	1.8%
2	Non-Recyclable Plastic	1.7%
3	Non-Recyclable Paper	0.9%
4	Plastic Bags & Film	0.8%
5	Electronics	0.5%
6	Polystyrene	0.4%
7	Non-Recyclable Glass	0.4%
8	Non-Recyclable Metal	0.3%
9	Non-Recyclable Metal	0.3%
10	--	--
	Cumulative Percent	**7.0%**

Detailed Recycling Material Composition – Tuesday Route

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Uncoated OCC	25.4%	4.8%	21.9%	28.9%
	Chipboard & Kraft Paper	15.0%	6.9%	9.9%	20.1%
	Newspaper	1.4%	2.0%	<0.1%	2.8%
	Mixed Paper	16.4%	8.4%	10.3%	22.6%
	White Office Paper	4.6%	8.3%	<0.1%	10.7%
	Aseptic, Gable Top & Tetra Pak Containers	0.8%	1.0%	<0.1%	1.5%
	Total	**63.6%**	**7.9%**		
Plastics					
	#1 PET	4.5%	1.0%	3.8%	5.3%
	#2 HDPE	3.3%	1.4%	2.3%	4.3%
	#3 PVC	<0.1%	0.0%	<0.1%	<0.1%
	#4 LDPE	<0.1%	0.0%	<0.1%	<0.1%
	#5 PP Containers	2.6%	2.2%	1.0%	4.2%
	#7 Other	0.5%	0.3%	0.3%	0.7%
	Total	**11.0%**	**2.3%**		
Metals					
	Aluminum Containers	2.1%	0.6%	1.7%	2.5%
	Aluminum Foil & Formed Containers	0.1%	0.1%	<0.1%	0.2%
	Steel/Tin Containers	1.0%	0.7%	0.5%	1.5%
	Aerosol Cans (Empty)	<0.1%	0.0%	<0.1%	<0.1%
	Paint Cans (Empty)	<0.1%	0.0%	<0.1%	<0.1%
	Total	**3.2%**	**0.9%**		
Glass					
	Glass Bottles & Jars (All Colors)	13.7%	6.2%	9.1%	18.2%
	Total	**13.7%**	**6.2%**		
Contaminated Recyclables					
	Contaminated Corrugated Cardboard	0.2%	0.3%	<0.1%	0.4%
	Other Contaminated Paper	0.8%	0.5%	0.4%	1.2%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Contaminated #1 PET	<0.1%	0.0%	<0.1%	<0.1%
	Contaminated #2 HDPE	<0.1%	0.0%	<0.1%	<0.1%
	Contaminated #5 PP	<0.1%	0.0%	<0.1%	<0.1%
	Other Contaminated Plastic	<0.1%	0.0%	<0.1%	<0.1%
	Contaminated Metal Foil & Formed Containers	<0.1%	0.0%	<0.1%	<0.1%
	Other Contaminated Metals	<0.1%	0.0%	<0.1%	<0.1%
	Contaminated Glass	<0.1%	0.0%	<0.1%	<0.1%
	Total	**1.0%**	**0.6%**		
Miscellaneous Contamination					
	Organic Waste	<0.1%	0.0%	<0.1%	<0.1%
	Plastic Bags & Film	1.3%	0.7%	0.8%	1.8%
	Polystyrene	0.2%	0.2%	<0.1%	0.4%
	Rope & String-Like Products	<0.1%	0.0%	<0.1%	<0.1%
	Electronics	<0.1%	0.0%	<0.1%	<0.1%
	Hazardous Waste	<0.1%	0.0%	<0.1%	<0.1%
	Propane Tanks	<0.1%	0.0%	<0.1%	<0.1%
	Manufactured Products	<0.1%	0.0%	<0.1%	<0.1%
	Medical Waste	<0.1%	0.0%	<0.1%	<0.1%
	Aerosol Cans (Not Empty)	<0.1%	0.0%	<0.1%	<0.1%
	Non-Recyclable Paper	<0.1%	0.0%	<0.1%	<0.1%
	Non-Recyclable Plastic	<0.1%	0.0%	<0.1%	<0.1%
	Non-Recyclable Glass	<0.1%	0.0%	<0.1%	<0.1%
	Non-Recyclable Metal	0.4%	0.7%	<0.1%	0.9%
	Refuse	5.6%	7.7%	<0.1%	11.3%
	Total Contamination	**7.5%**	**7.8%**		
	Total of Overall	**100%**			

Recycling Composition – Tuesday Route



Top Ten Recycling Materials – Tuesday Route

Village of Oak Park Recycling – Tuesday		
#	**Material**	**%**
1	Uncoated OCC	25.4%
2	Mixed Paper	16.4%
3	Chipboard & Kraft Paper	15.0%
4	Glass Bottles & Jars (All Colors)	13.7%
5	Refuse	5.6%
6	White Office Paper	4.6%
7	#1 PET	4.5%
8	#2 HDPE	3.3%
9	#5 PP Containers	2.6%
10	Aluminum Containers	2.1%
	Cumulative Percent	**93.3%**

Top Ten Recycling Materials Contamination – Tuesday Route

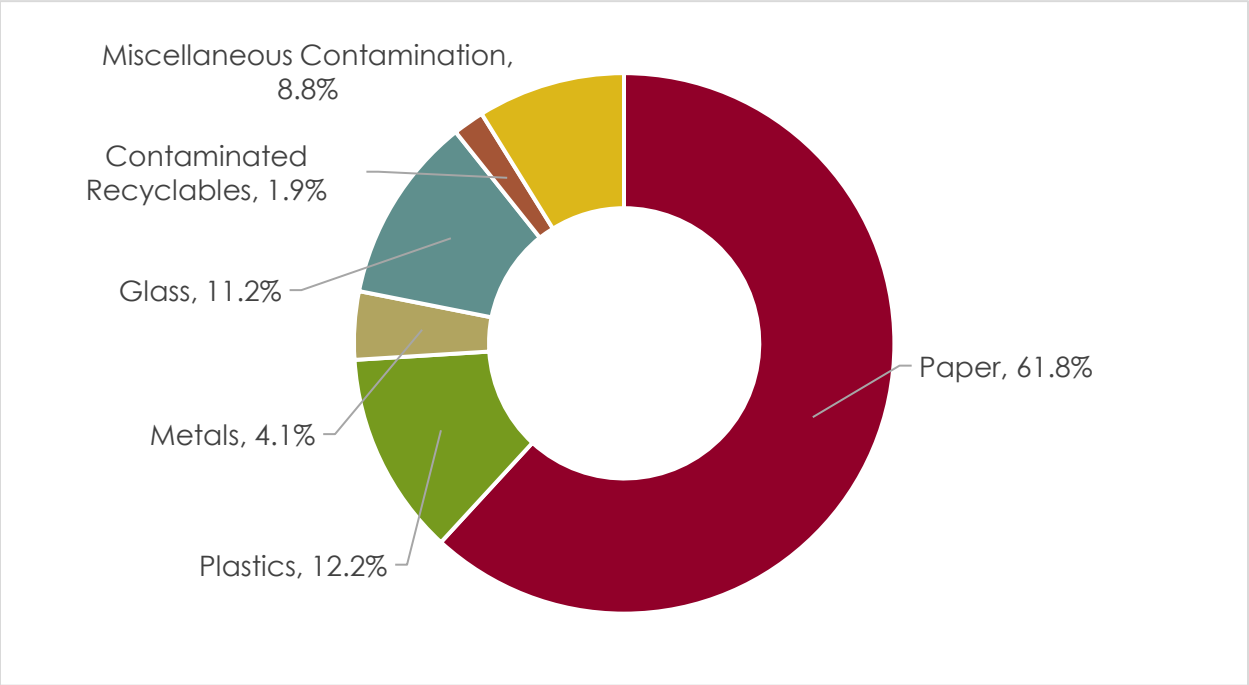
Village of Oak Park Recycling - Tuesday		
#	**Contaminant**	**%**
1	Refuse	5.6%
2	Plastic Bags & Film	1.3%
3	Non-Recyclable Metal	0.4%
4	Polystyrene	0.2%
5	--	--
6	--	--
7	--	--
8	--	--
9	--	--
10	--	--
	Cumulative Percent	**7.5%**

Detailed Recycling Material Composition – Wednesday Route

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Uncoated OCC	34.0%	7.5%	28.4%	39.5%
	Chipboard & Kraft Paper	14.1%	4.5%	10.8%	17.4%
	Newspaper	1.0%	0.5%	0.6%	1.4%
	Mixed Paper	10.0%	3.7%	7.3%	12.8%
	White Office Paper	2.8%	2.9%	0.7%	4.9%
	Aseptic, Gable Top & Tetra Pak Containers	0.7%	1.7%	<0.1%	1.9%
	Total Paper	**62.6%**	**3.7%**		
Plastics					
	#1 PET	5.9%	1.7%	4.7%	7.1%
	#2 HDPE	2.4%	1.3%	1.5%	3.4%
	#3 PVC	<0.1%	0.0%	<0.1%	<0.1%
	#4 LDPE	<0.1%	0.0%	<0.1%	<0.1%
	#5 PP Containers	2.4%	2.2%	0.7%	4.0%
	#7 Other	1.5%	0.7%	0.9%	2.0%
	Total	**12.2%**	**4.3%**		
Metals					
	Aluminum Containers	2.5%	1.2%	1.6%	3.3%
	Aluminum Foil & Formed Containers	0.2%	0.1%	<0.1%	0.2%
	Steel/Tin Containers	1.3%	0.6%	0.9%	1.8%
	Aerosol Cans (Empty)	<0.1%	0.2%	<0.1%	<0.1%
	Paint Cans (Empty)	<0.1%	0.0%	<0.1%	<0.1%
	Total	**4.1%**	**1.6%**		
Glass					
	Glass Bottles & Jars (All Colors)	11.2%	5.9%	6.9%	15.5%
	Total	**11.2%**	**5.9%**		
Contaminated Recyclables					
	Contaminated Corrugated Cardboard	0.6%	1.4%	<0.1%	1.7%
	Other Contaminated Paper	<0.1%	0.0%	<0.1%	<0.1%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Contaminated #1 PET	0.4%	0.9%	<0.1%	1.0%
	Contaminated #2 HDPE	<0.1%	0.1%	<0.1%	<0.1%
	Contaminated #5 PP	<0.1%	0.2%	<0.1%	<0.1%
	Other Contaminated Plastic	<0.1%	0.0%	<0.1%	<0.1%
	Contaminated Metal Foil & Formed Containers	<0.1%	0.0%	<0.1%	<0.1%
	Other Contaminated Metals	<0.1%	0.1%	<0.1%	<0.1%
	Contaminated Glass	0.6%	1.0%	<0.1%	1.4%
	Total	**1.9%**	**2.9%**		
Miscellaneous Contamination					
	Organic Waste	0.9%	1.9%	<0.1%	2.3%
	Plastic Bags & Film	1.5%	0.7%	1.0%	2.0%
	Polystyrene	0.5%	0.5%	0.2%	0.9%
	Rope & String-Like Products	0.2%	0.4%	<0.1%	0.5%
	Electronics	<0.1%	0.0%	<0.1%	<0.1%
	Hazardous Waste	<0.1%	0.0%	<0.1%	<0.1%
	Propane Tanks	<0.1%	0.0%	<0.1%	<0.1%
	Manufactured Products	<0.1%	0.0%	<0.1%	<0.1%
	Medical Waste	<0.1%	0.0%	<0.1%	<0.1%
	Aerosol Cans (Not Empty)	<0.1%	0.0%	<0.1%	<0.1%
	Non-Recyclable Paper	0.5%	0.3%	0.2%	0.7%
	Non-Recyclable Plastic	<0.1%	0.0%	<0.1%	<0.1%
	Non-Recyclable Glass	0.4%	0.8%	<0.1%	1.0%
	Non-Recyclable Metal	2.9%	5.5%	<0.1%	7.0%
	Refuse	1.3%	1.5%	0.2%	2.4%
	Total	**8.1%**	**5.4%**		
	Total of Overall Waste	**100%**			

Recycling Composition – Wednesday Route



Top Ten Recycling Materials – Wednesday Route

Village of Oak Park Recycling – Wednesday		
#	**Material**	**%**
1	Uncoated OCC	34.0%
2	Chipboard & Kraft Paper	14.1%
3	Glass Bottles & Jars (All Colors)	11.2%
4	Mixed Paper	10.0%
5	#1 PET	5.9%
6	Non-Recyclable Metal	2.9%
7	White Office Paper	2.8%
8	Aluminum Containers	2.5%
9	#2 HDPE	2.4%
10	#5 PP Containers	2.4%
	Cumulative Percent	**88.1%**

Top Ten Recycling Materials Contamination – Wednesday Route

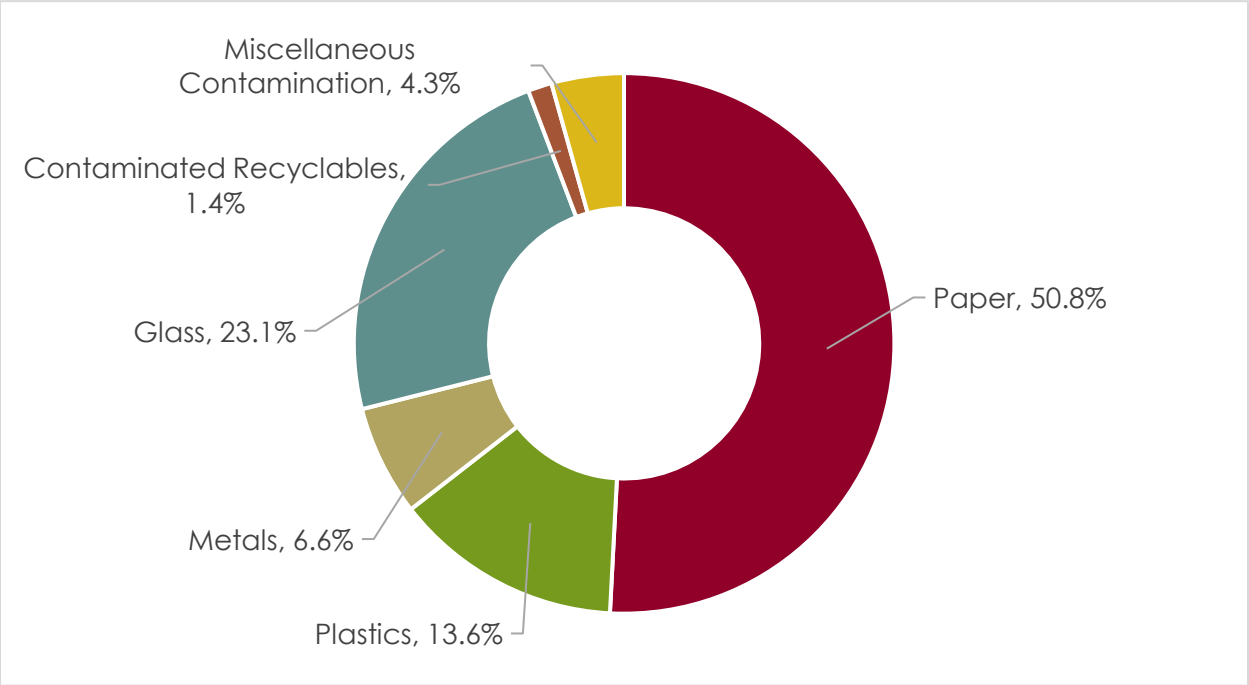
Village of Oak Park Recycling - Wednesday		
#	**Contaminant**	**%**
1	Non-Recyclable Metal	2.9%
2	Plastic Bags & Film	1.5%
3	Refuse	1.3%
4	Organic Waste	0.9%
5	Polystyrene	0.5%
6	Non-Recyclable Paper	0.5%
7	Non-Recyclable Glass	0.4%
8	Rope & String-Like Products	0.2%
9	--	--
10	--	--
	Cumulative Percent	**8.1%**

Detailed Recycling Material Composition – Thursday Route

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Uncoated OCC	17.6%	5.0%	13.9%	21.3%
	Chipboard & Kraft Paper	14.8%	4.0%	11.9%	17.7%
	Newspaper	2.4%	2.5%	0.5%	4.2%
	Mixed Paper	12.7%	2.5%	10.9%	14.5%
	White Office Paper	3.4%	1.3%	2.4%	4.3%
	Aseptic, Gable Top & Tetra Pak Containers	0.6%	1.7%	<0.1%	1.9%
	Total	**51.5%**	**9.2%**		
Plastics					
	#1 PET	6.1%	1.7%	4.9%	7.4%
	#2 HDPE	2.8%	0.9%	2.1%	3.5%
	#3 PVC	<0.1%	<0.1%	<0.1%	<0.1%
	#4 LDPE	<0.1%	<0.1%	<0.1%	<0.1%
	#5 PP Containers	2.0%	0.8%	1.3%	2.6%
	#7 Other	2.8%	2.3%	1.1%	4.5%
	Total	**13.6%**	**2.3%**		
Metals					
	Aluminum Containers	4.1%	2.1%	2.6%	5.6%
	Aluminum Foil & Formed Containers	0.2%	0.2%	<0.1%	0.3%
	Steel/Tin Containers	2.1%	0.8%	1.5%	2.7%
	Aerosol Cans (Empty)	0.2%	0.2%	<0.1%	0.3%
	Paint Cans (Empty)	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**6.6%**	**2.5%**		
Glass					
	Glass Bottles & Jars (All Colors)	23.1%	9.8%	15.9%	30.4%
	Total	**23.1%**	**9.8%**		
Contaminated Recyclables					
	Contaminated Corrugated Cardboard	<0.1%	<0.1%	<0.1%	<0.1%
	Other Contaminated Paper	<0.1%	<0.1%	<0.1%	<0.1%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Contaminated #1 PET	0.3%	0.3%	0.1%	0.6%
	Contaminated #2 HDPE	<0.1%	0.1%	<0.1%	<0.1%
	Contaminated #5 PP	<0.1%	0.1%	<0.1%	<0.1%
	Other Contaminated Plastic	0.3%	0.4%	<0.1%	0.6%
	Contaminated Metal Foil & Formed Containers	<0.1%	<0.1%	<0.1%	<0.1%
	Other Contaminated Metals	<0.1%	0.1%	<0.1%	<0.1%
	Contaminated Glass	0.6%	1.4%	<0.1%	1.7%
	Total	**1.4%**	**1.5%**		
Miscellaneous Contamination					
	Organic Waste	0.9%	1.3%	<0.1%	1.9%
	Plastic Bags & Film	0.9%	0.5%	0.5%	1.3%
	Polystyrene	0.2%	0.1%	<0.1%	0.2%
	Rope & String-Like Products	<0.1%	0.0%	<0.1%	<0.1%
	Electronics	<0.1%	0.0%	<0.1%	<0.1%
	Hazardous Waste	<0.1%	0.0%	<0.1%	<0.1%
	Propane Tanks	<0.1%	0.1%	<0.1%	<0.1%
	Manufactured Products	<0.1%	0.0%	<0.1%	<0.1%
	Medical Waste	<0.1%	0.1%	<0.1%	<0.1%
	Aerosol Cans (Not Empty)	<0.1%	0.0%	<0.1%	<0.1%
	Non-Recyclable Paper	0.7%	0.9%	<0.1%	1.3%
	Non-Recyclable Plastic	<0.1%	0.0%	<0.1%	<0.1%
	Non-Recyclable Glass	<0.1%	0.1%	<0.1%	<0.1%
	Non-Recyclable Metal	0.1%	0.2%	<0.1%	0.3%
	Refuse	0.8%	0.9%	0.2%	1.5%
	Total	**3.6%**	**2.3%**		
	Total of Overall Waste	**100%**			

Recycling Composition – Thursday Route



Top Ten Recycling Materials – Thursday Route

Village of Oak Park Recycling – Thursday		
#	**Material**	**%**
1	Glass Bottles & Jars (All Colors)	23.1%
2	Uncoated OCC	17.6%
3	Chipboard & Kraft Paper	14.8%
4	Mixed Paper	12.7%
5	#1 PET	6.1%
6	Aluminum Containers	4.1%
7	White Office Paper	3.4%
8	#2 HDPE	2.8%
9	#7 Other	2.8%
10	Newspaper	2.4%
	Cumulative Percent	**89.8%**

Top Ten Recycling Materials Contamination – Thursday Route

Village of Oak Park Recycling - Thursday		
#	**Contaminant**	**%**
1	Plastic Bags & Film	0.9%
2	Organic Waste	0.9%
3	Refuse	0.8%
4	Non-Recyclable Paper	0.7%
5	Polystyrene	0.2%
6	Non-Recyclable Metal	0.1%
7	--	--
8	--	--
9	--	--
10	--	--
	Cumulative Percent	**3.6%**

Detailed Recycling Material Composition – Friday Route

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
Paper					
	Uncoated OCC	25.5%	10.4%	17.9%	33.2%
	Chipboard & Kraft Paper	13.9%	4.8%	10.3%	17.4%
	Newspaper	3.4%	3.9%	0.6%	6.3%
	Mixed Paper	9.2%	3.7%	6.5%	11.9%
	White Office Paper	2.9%	2.1%	1.3%	4.5%
	Aseptic, Gable Top & Tetra Pak Containers	1.1%	1.7%	<0.1%	2.3%
	Total	**56.0%**	**15.0%**		
Plastics					
	#1 PET	5.7%	1.7%	4.4%	7.0%
	#2 HDPE	2.6%	1.3%	1.7%	3.5%
	#3 PVC	0.3%	0.4%	<0.1%	0.6%
	#4 LDPE	<0.1%	<0.1%	<0.1%	<0.1%
	#5 PP Containers	1.1%	0.6%	0.6%	1.5%
	#7 Other	2.5%	4.5%	<0.1%	5.9%
	Total	**12.3%**	**4.9%**		
Metals					
	Aluminum Containers	2.6%	1.5%	1.5%	3.7%
	Aluminum Foil & Formed Containers	0.6%	0.8%	<0.1%	1.2%
	Steel/Tin Containers	1.3%	0.4%	0.9%	1.6%
	Aerosol Cans (Empty)	0.1%	0.3%	<0.1%	0.4%
	Paint Cans (Empty)	<0.1%	<0.1%	<0.1%	<0.1%
	Total	**4.6%**	**0.8%**		
Glass					
	Glass Bottles & Jars (All Colors)	18.7%	11.1%	10.6%	26.9%
	Total	**18.7%**	**11.1%**		
Contaminated Recyclables					
	Contaminated Corrugated Cardboard	0.2%	0.4%	<0.1%	0.5%
	Other Contaminated Paper	<0.1%	<0.1%	<0.1%	<0.1%

Material Categories	Material Components	Mean Composition (%)	Standard Deviation (%)	90% Confidence Limits	
				Lower	Upper
	Contaminated #1 PET	0.8%	1.0%	<0.1%	1.5%
	Contaminated #2 HDPE	0.1%	0.2%	<0.1%	0.3%
	Contaminated #5 PP	0.2%	0.3%	<0.1%	0.4%
	Other Contaminated Plastic	0.1%	0.2%	<0.1%	0.3%
	Contaminated Metal Foil & Formed Containers	<0.1%	<0.1%	<0.1%	<0.1%
	Other Contaminated Metals	0.6%	1.4%	<0.1%	1.6%
	Contaminated Glass	0.8%	1.7%	<0.1%	2.0%
	Total	**2.7%**	**3.1%**		
Miscellaneous Contamination					
	Organic Waste	0.5%	1.0%	<0.1%	1.2%
	Plastic Bags & Film	1.0%	0.5%	0.6%	1.4%
	Polystyrene	0.3%	0.2%	0.1%	0.4%
	Rope & String-Like Products	<0.1%	0.0%	<0.1%	<0.1%
	Electronics	0.5%	1.1%	<0.1%	1.3%
	Hazardous Waste	<0.1%	0.0%	<0.1%	<0.1%
	Propane Tanks	<0.1%	0.0%	<0.1%	<0.1%
	Manufactured Products	0.6%	0.9%	<0.1%	1.3%
	Medical Waste	0.2%	0.4%	<0.1%	0.4%
	Aerosol Cans (Not Empty)	0.1%	0.2%	<0.1%	0.3%
	Non-Recyclable Paper	0.3%	0.2%	0.2%	0.5%
	Non-Recyclable Plastic	<0.1%	0.0%	<0.1%	<0.1%
	Non-Recyclable Glass	0.2%	0.3%	<0.1%	0.5%
	Non-Recyclable Metal	0.3%	0.6%	<0.1%	0.8%
	Refuse	1.5%	1.8%	0.2%	2.9%
	Total	**5.6%**	**4.2%**		
	Total of Overall Waste	**100%**			

Recycling Composition – Friday Route

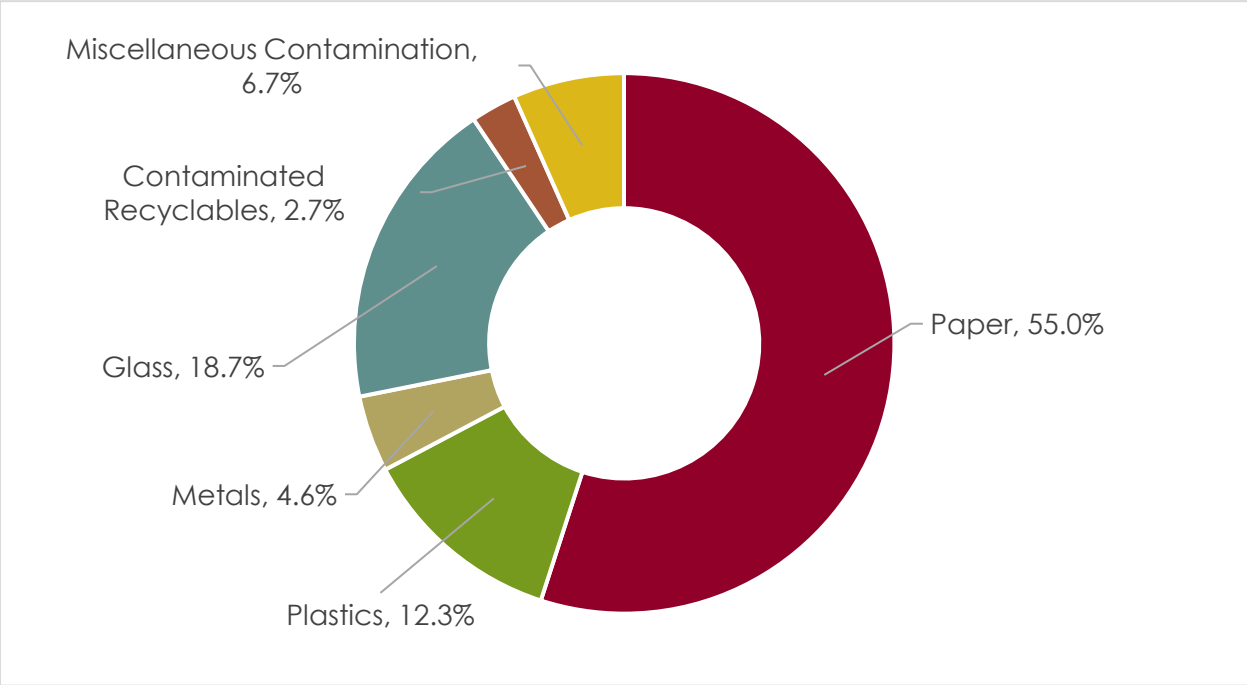


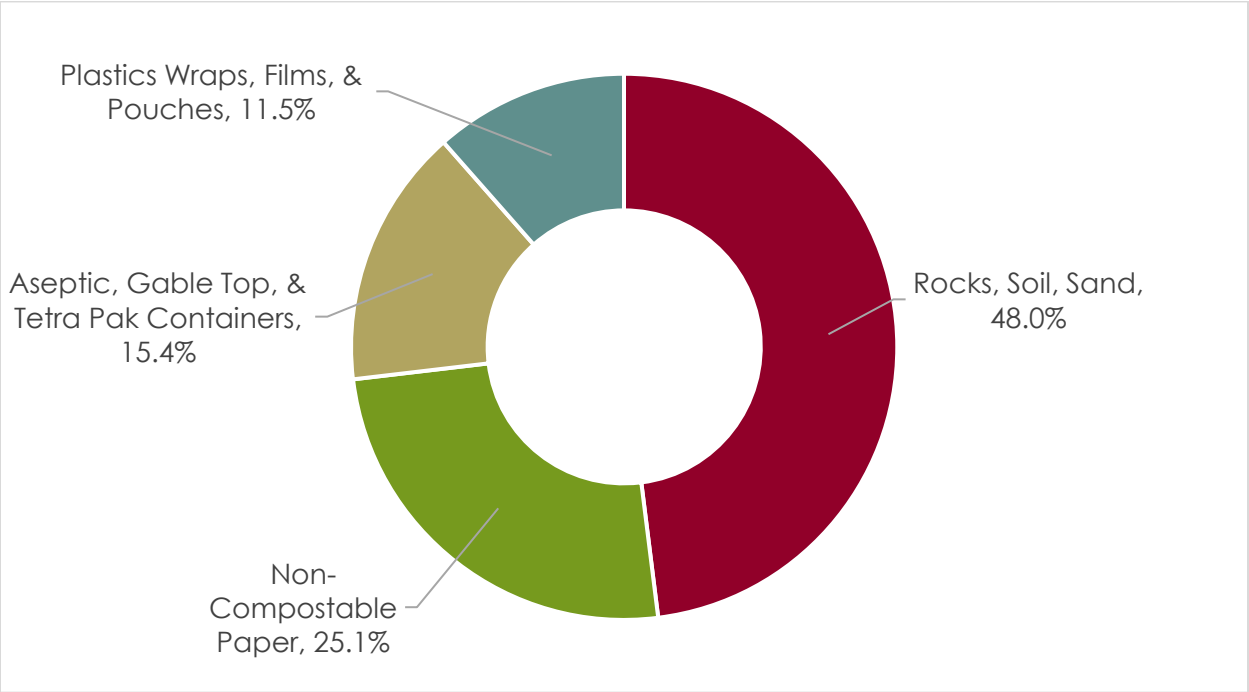
Table 1. Top Ten Recycling Materials – Friday Route

Village of Oak Park Recycling – Friday		
#	**Material**	**%**
1	Uncoated OCC	25.5%
2	Glass Bottles & Jars (All Colors)	18.7%
3	Chipboard & Kraft Paper	13.9%
4	Mixed Paper	9.2%
5	#1 PET	5.7%
6	Newspaper	3.4%
7	White Office Paper	2.9%
8	#2 HDPE	2.6%
9	Aluminum Containers	2.6%
10	#7 Other	2.5%
	Cumulative Percent	**87.2%**

Top Ten Recycling Materials Contamination – Friday Route

Village of Oak Park Recycling - Friday		
#	**Contaminant**	**%**
1	Refuse	1.5%
2	Plastic Bags & Film	1.0%
3	Manufactured Products	0.6%
4	Organic Waste	0.5%
5	Electronics	0.5%
6	Non-Recyclable Paper	0.3%
7	Non-Recyclable Metal	0.3%
8	Polystyrene	0.3%
9	Non-Recyclable Glass	0.2%
10	Medical Waste	0.2%
	Cumulative Percent	**5.6%**

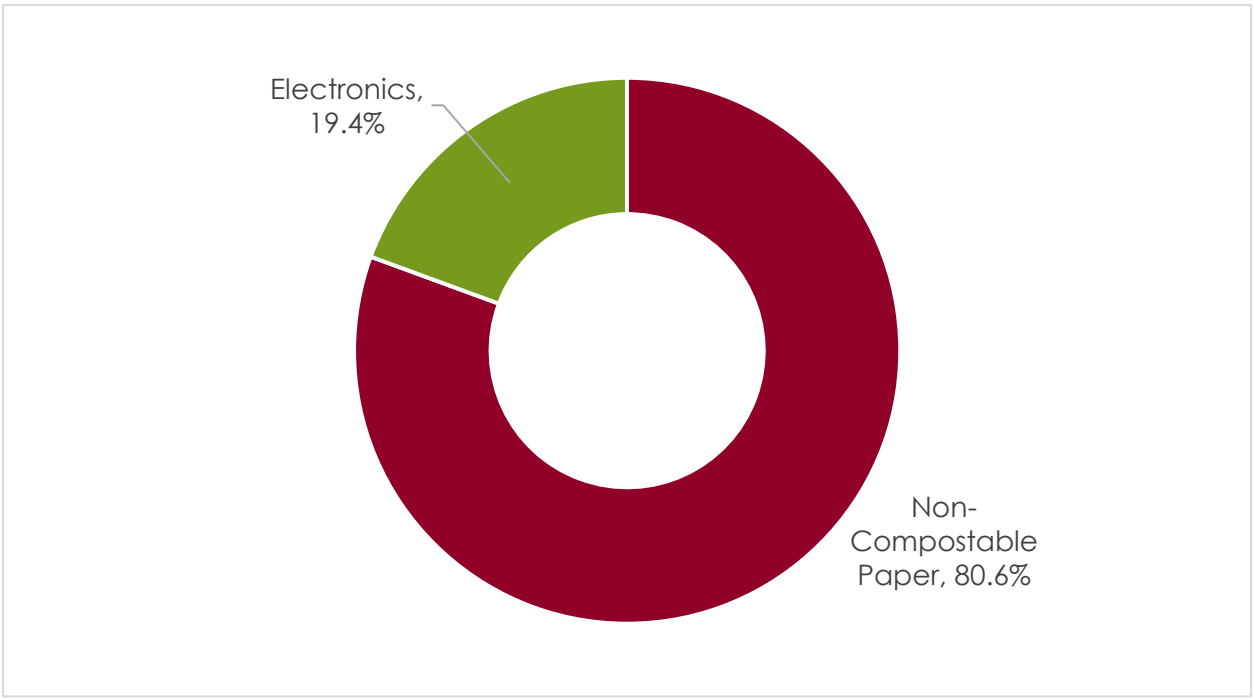
Organics Contamination Composition – Monday Route



Top Ten Organics Contaminants – Monday Route

Village of Oak Park Organics Contamination – Monday		
#	**Contamination**	**%**
1	Rocks, Soil, Sand	48.0%
2	Non-Compostable Paper	25.1%
3	Aseptic, Gable Top, & Tetra Pak Containers	15.4%
4	Plastics Wraps, Films, & Pouches	11.5%
5		
6		
7		
8		
9		
10		
	Cumulative Percent	**100.0%**

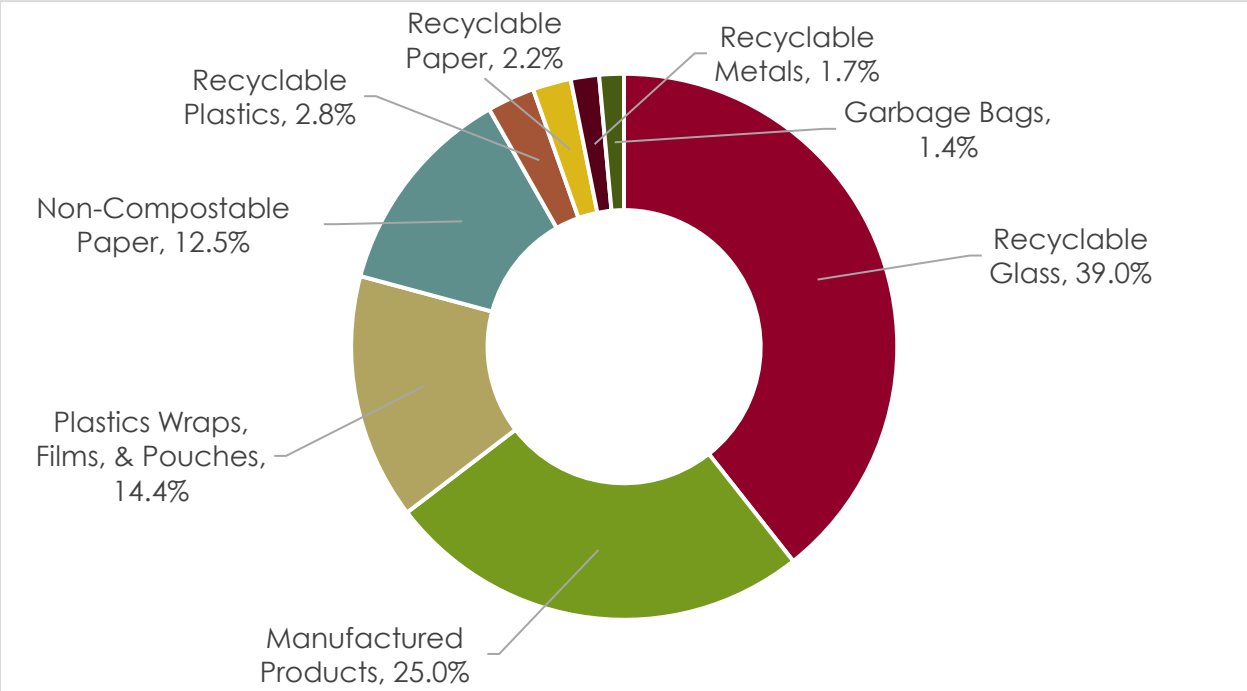
Organics Contamination Composition – Tuesday Route



Top Ten Organics Contaminants – Tuesday Route

Village of Oak Park Organics Contamination – Tuesday		
#	**Contamination**	**%**
1	Non-Compostable Paper	80.6%
2	Electronics	19.4%
3		
4		
5		
6		
7		
8		
9		
10		
	Cumulative Percent	**100.0%**

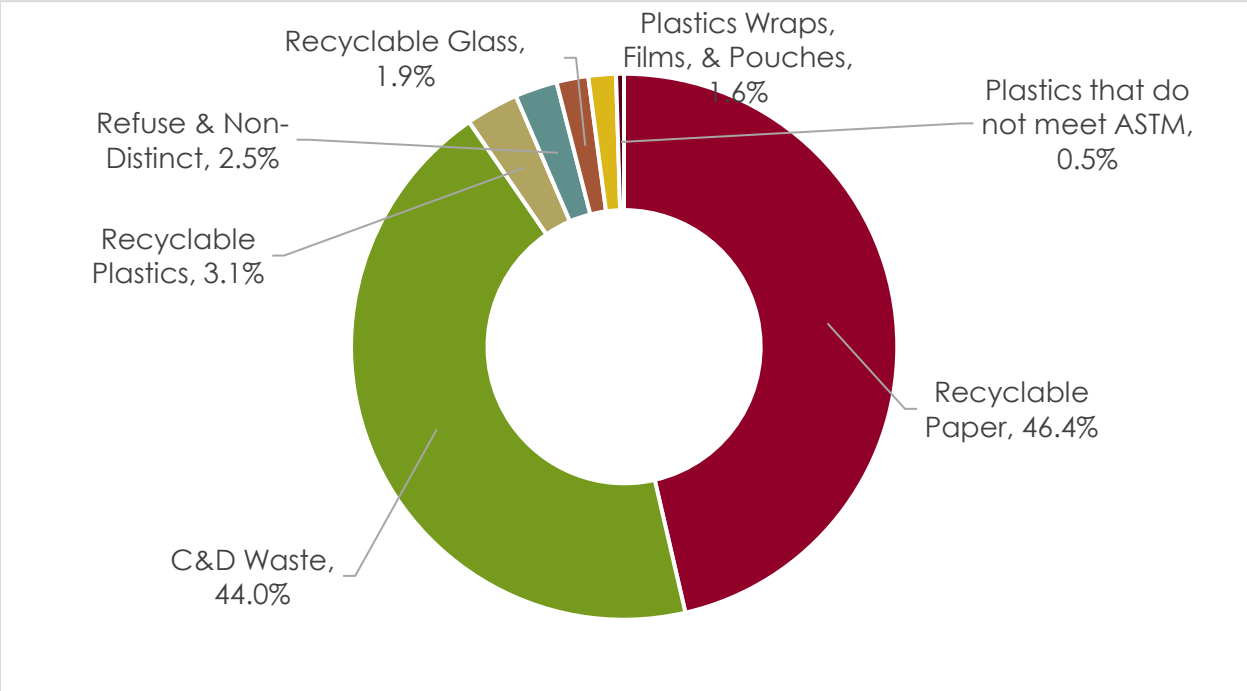
Organics Contamination Composition – Wednesday Route



Top Ten Organics Contaminants – Wednesday Route

Village of Oak Park Organics Contamination – Wednesday		
#	**Contamination**	**%**
1	Recyclable Glass	39.0%
2	Manufactured Products	25.0%
3	Plastics Wraps, Films, & Pouches	14.4%
4	Non-Compostable Paper	12.5%
5	Recyclable Plastics	2.8%
6	Recyclable Paper	2.2%
7	Recyclable Metals	1.7%
8	Garbage Bags	1.4%
9	Unclassifiable Fines	1.0%
10		
	Cumulative Percent	**100.0%**

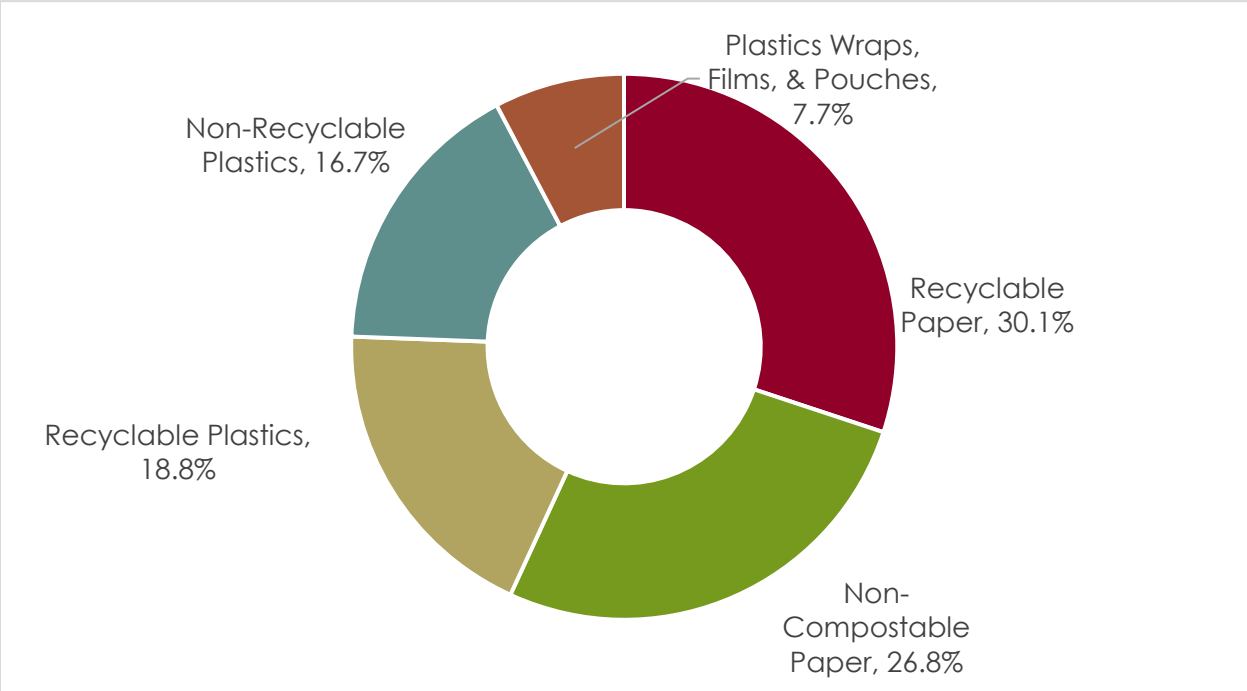
Organics Contamination Composition – Thursday Route



Top Ten Organics Contaminants – Thursday Route

Village of Oak Park Organics Contamination – Thursday		
#	**Contamination**	**%**
1	Recyclable Paper	46.4%
2	C&D Waste	44.0%
3	Recyclable Plastics	3.1%
4	Refuse & Non-Distinct	2.5%
5	Recyclable Glass	1.9%
6	Plastics Wraps, Films, & Pouches	1.6%
7	Plastics that do not meet ASTM	0.5%
8		
9		
10		
	Cumulative Percent	**100.0%**

Organics Contamination Composition – Friday Route



Top Ten Organics Contaminants – Friday Route

Village of Oak Park Organics Contamination – Friday		
#	**Contamination**	**%**
1	Recyclable Paper	30.1%
2	Non-Compostable Paper	26.8%
3	Recyclable Plastics	18.8%
4	Non-Recyclable Plastics	16.7%
5	Plastics Wraps, Films, & Pouches	7.7%
6		
7		
8		
9		
10		
	Cumulative Percent	**100.0%**

Attachment **E**

Community Survey and Feedback

Oak Park

Waste Survey for Single-Family Residents

SURVEY RESPONSE REPORT

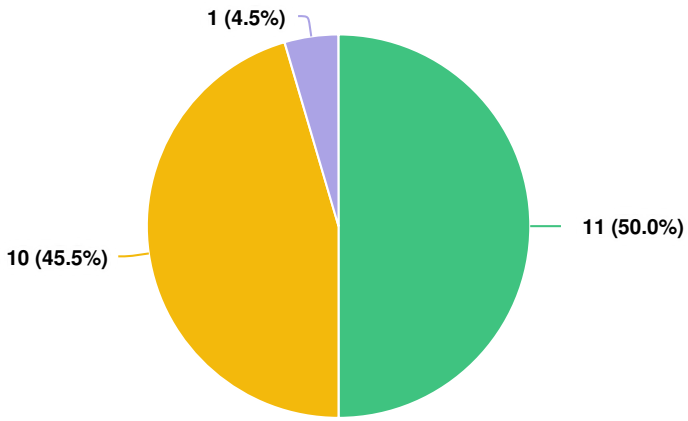
09 January 2023 - 23 November 2025

PROJECT NAME:
Waste Characterization Study

GRANICUS

REGISTRATION QUESTIONS

Q1 ZIP Code



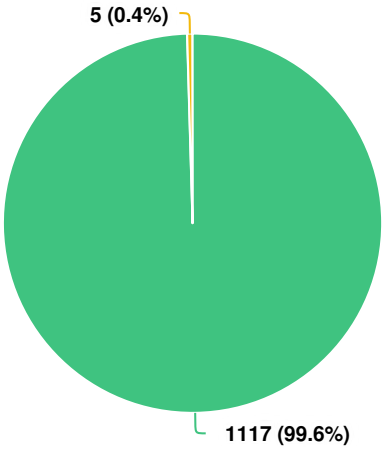
Question options

- Oak Park, IL 60304
- Oak Park, IL 60302
- Oak Park, IL 60301

Mandatory Question (22 response(s))
Question type: Region Question

SURVEY QUESTIONS

Q1 Do you live in a single-family residence or in a building with five or fewer units served by the Village's waste hauler (LR...

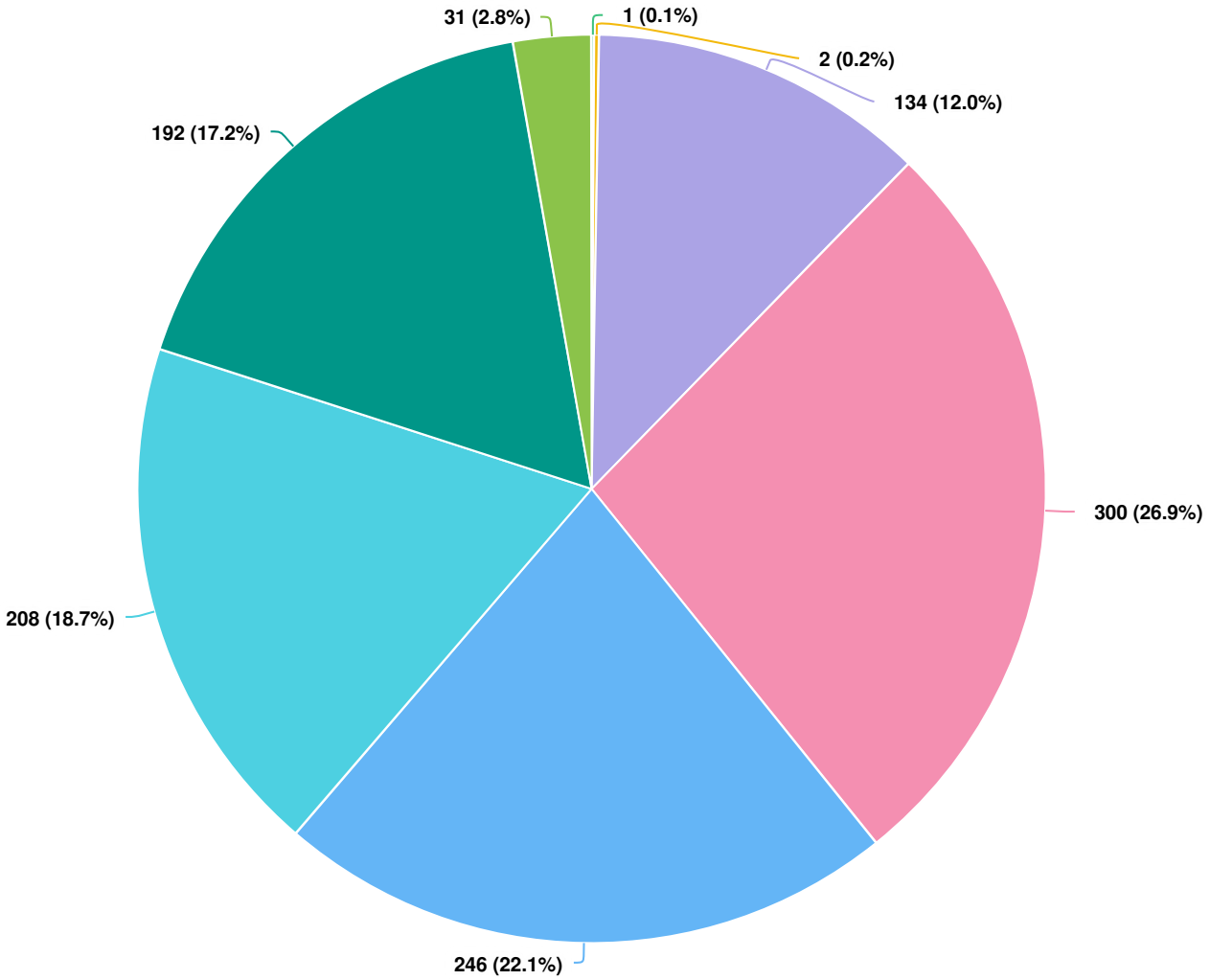


Question options

Yes No

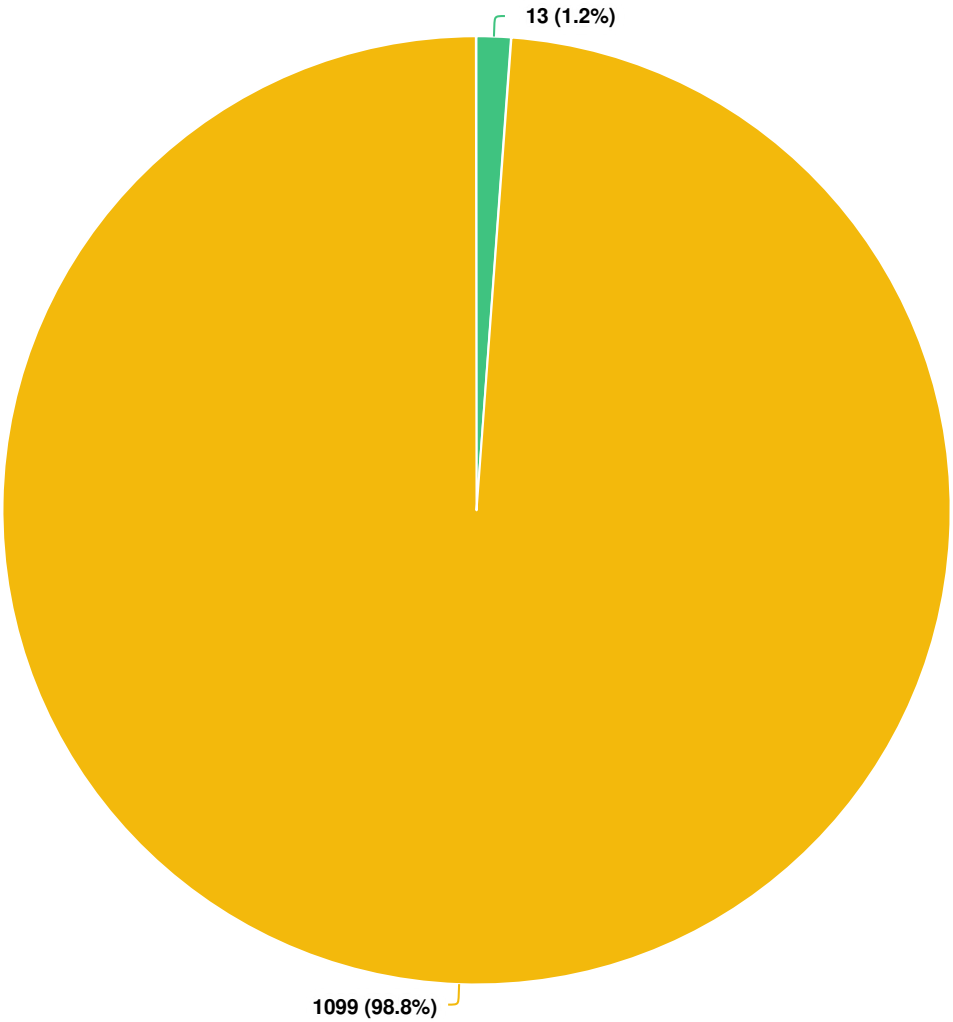
Mandatory Question (1122 response(s))
Question type: Radio Button Question

Q2 What is your age range?



Optional question (1114 response(s), 8 skipped)
Question type: Radio Button Question

Q3 Do you rent or own your residence?

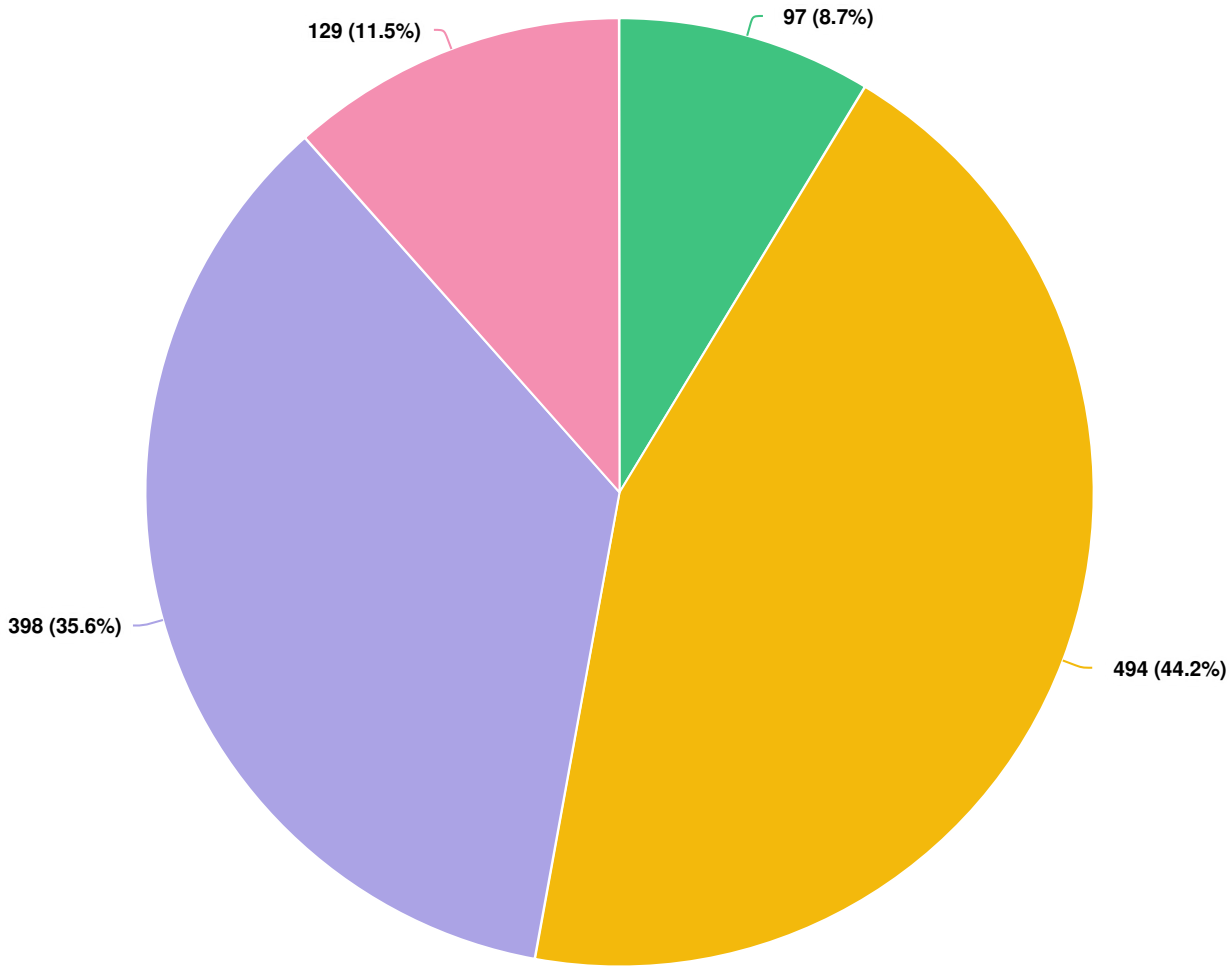


Question options

Rent Own

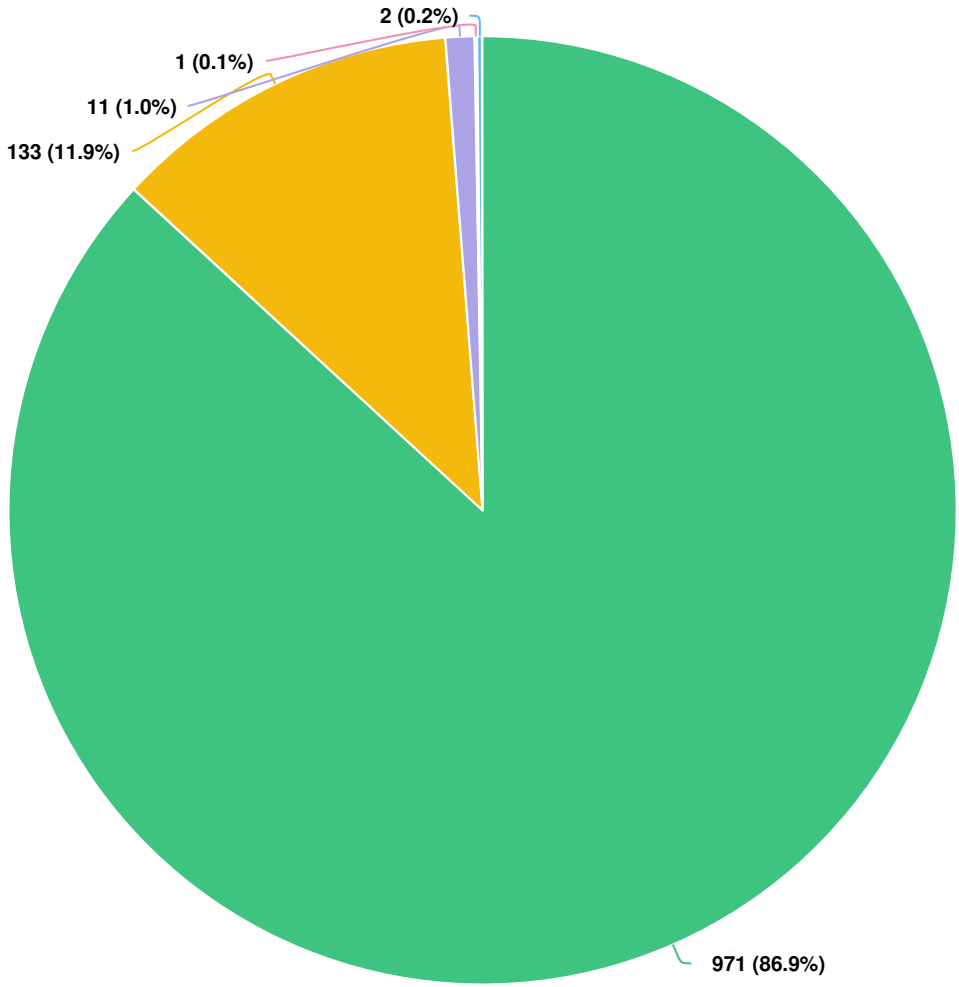
Optional question (1112 response(s), 10 skipped)
Question type: Radio Button Question

Q4 Approximately how much garbage does your household generate per week?



Mandatory Question (1118 response(s))
Question type: Radio Button Question

Q5 How often do you separate recyclables from your garbage?

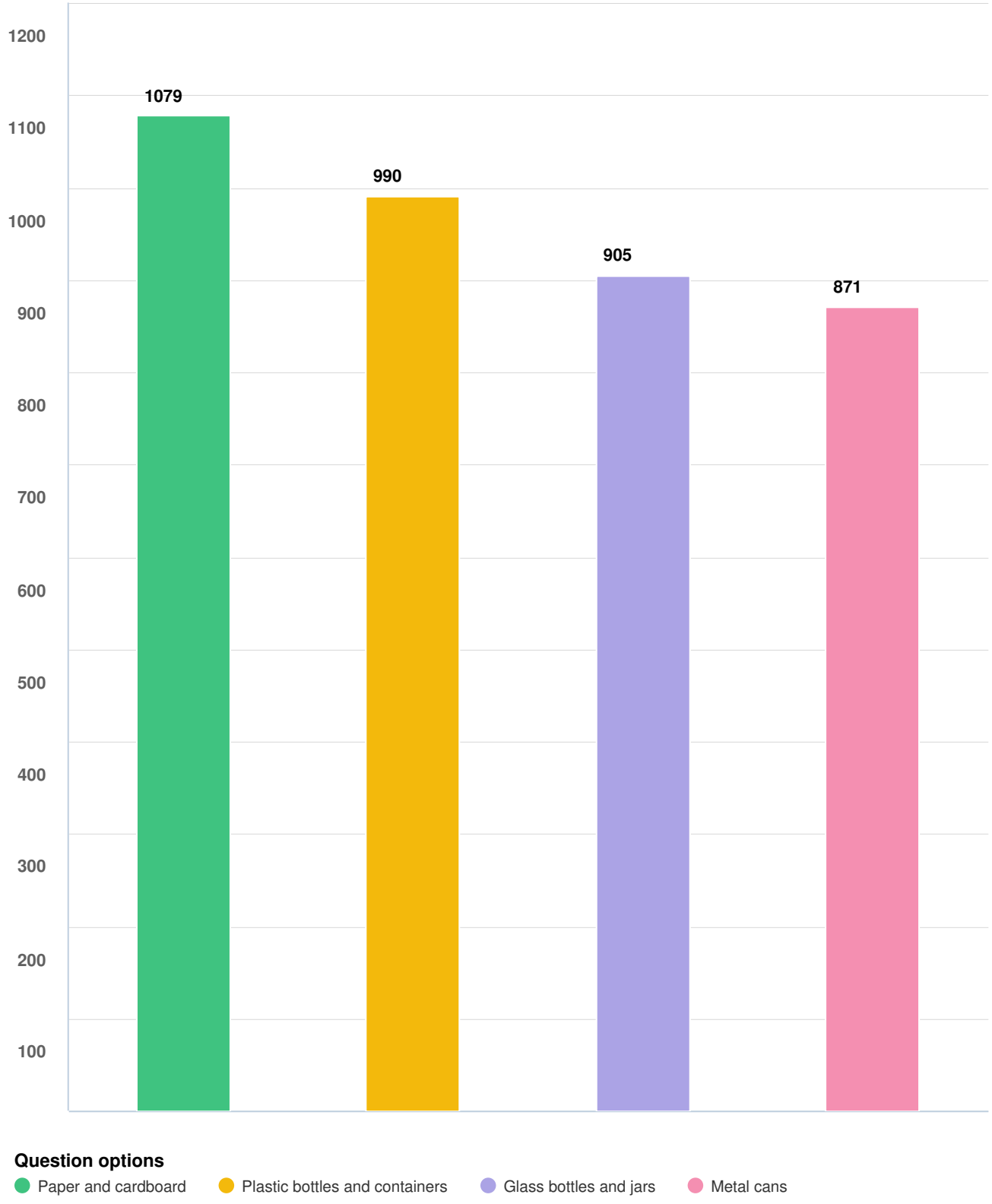


Question options

Always Often Sometimes Rarely Never

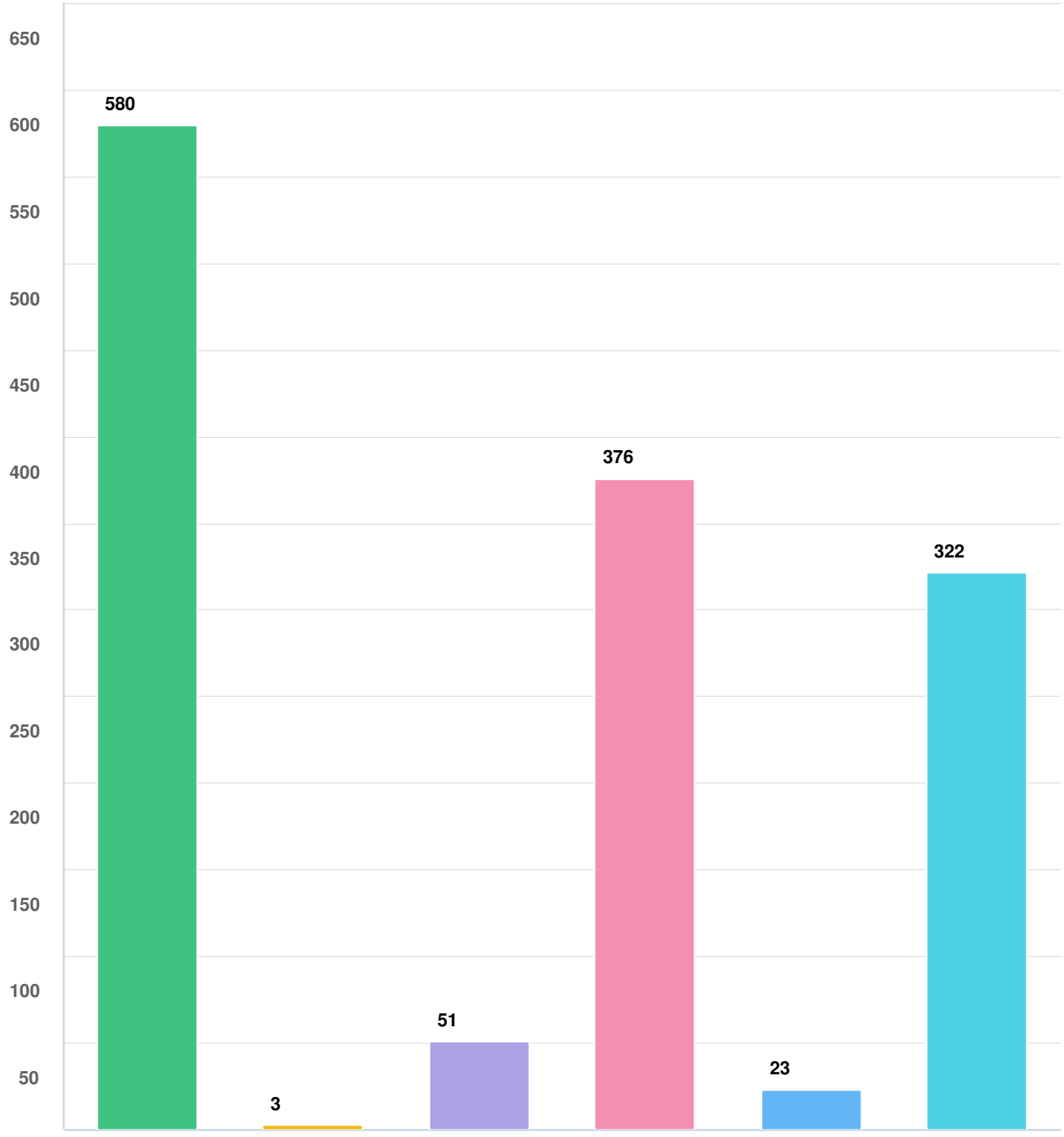
Mandatory Question (1118 response(s))
Question type: Radio Button Question

Q6 Which of the following materials do you most often recycle? (Select all that apply)



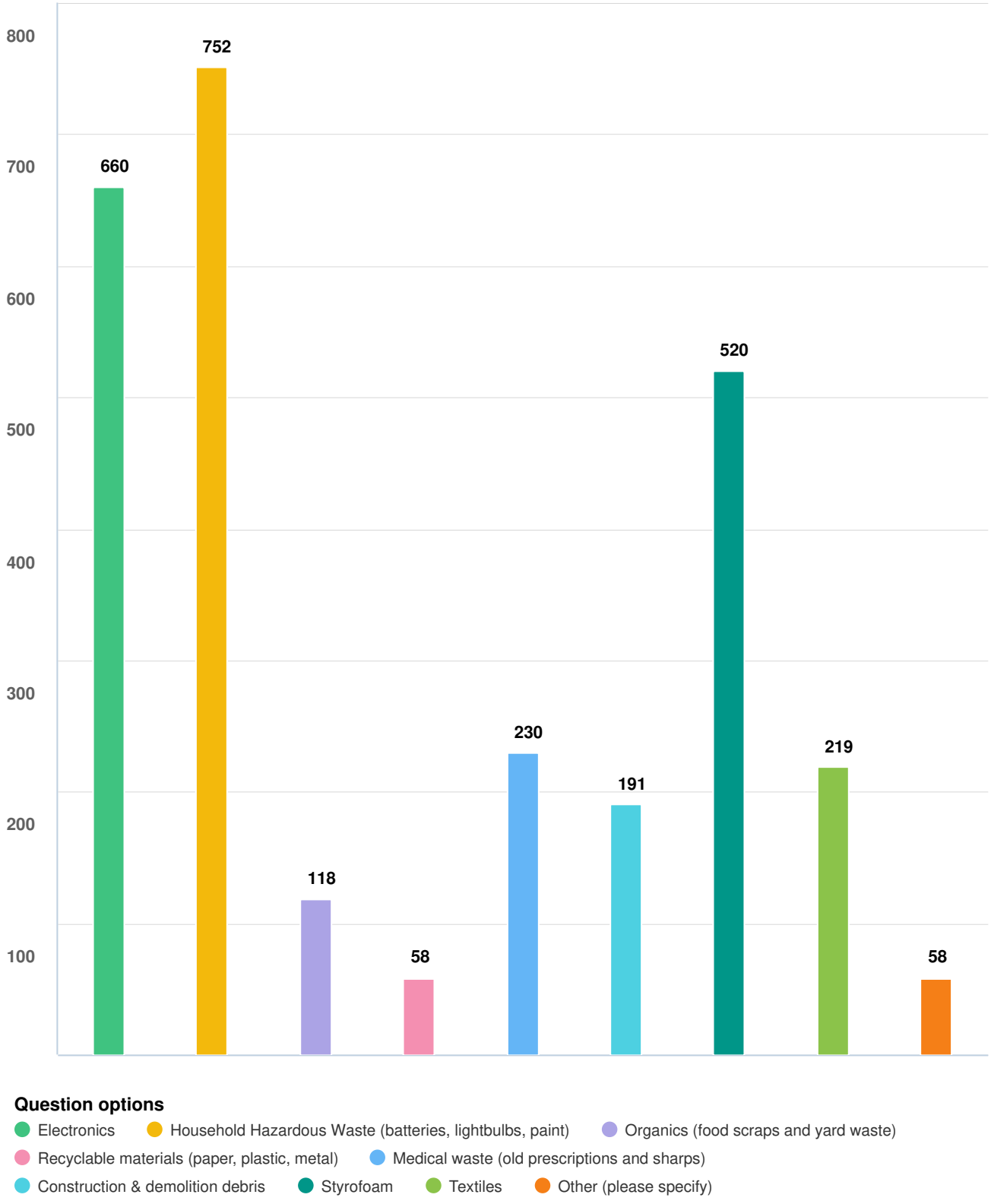
Mandatory Question (1118 response(s))
Question type: Checkbox Question

Q7 Which of the following barriers prevent you from recycling more? (Select all that apply)



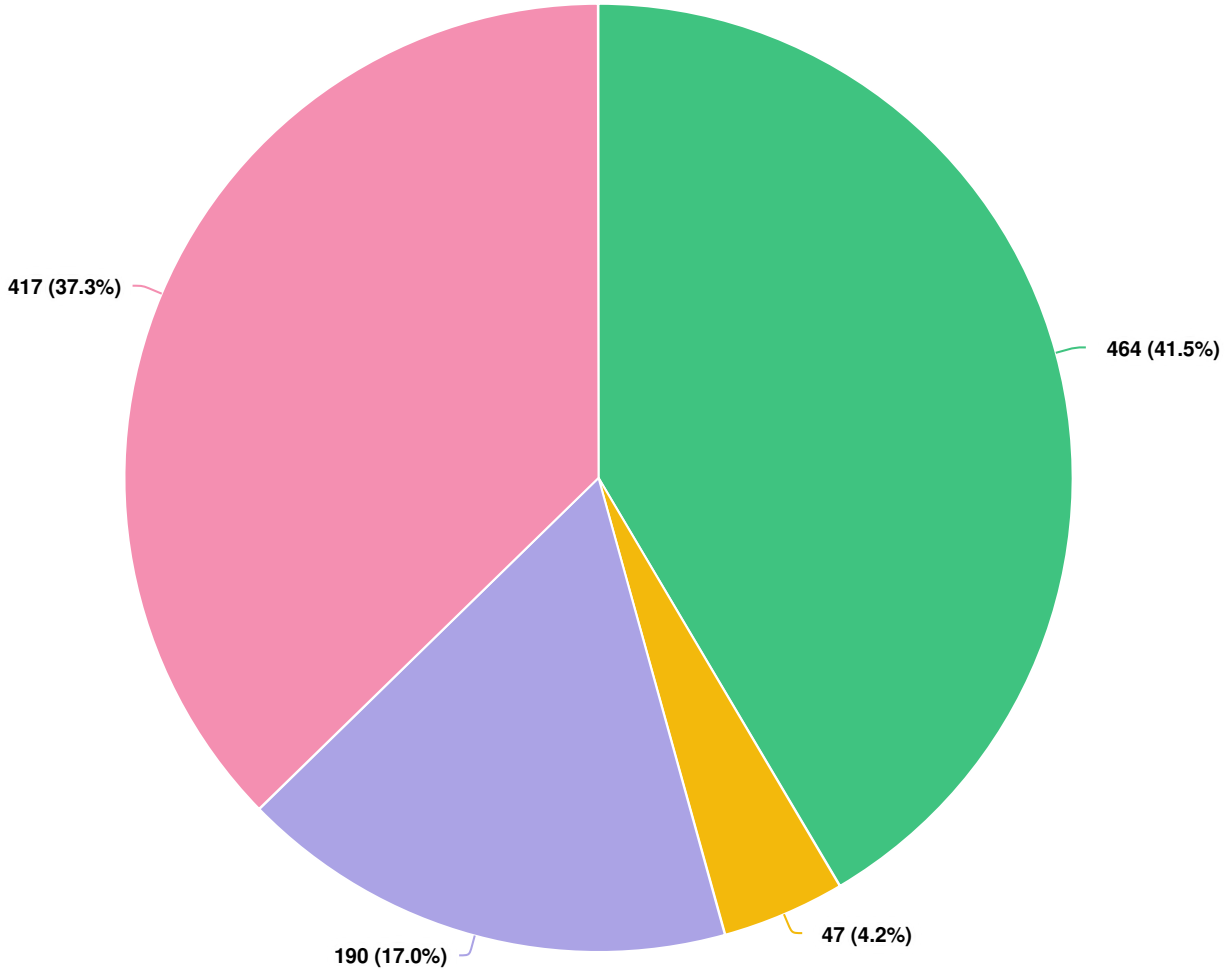
Mandatory Question (1118 response(s))
Question type: Checkbox Question

Q8 Which of the following waste types do you most often struggle to dispose of properly?



Mandatory Question (1118 response(s))
Question type: Checkbox Question

Q9 Do you currently compost any of your household waste?

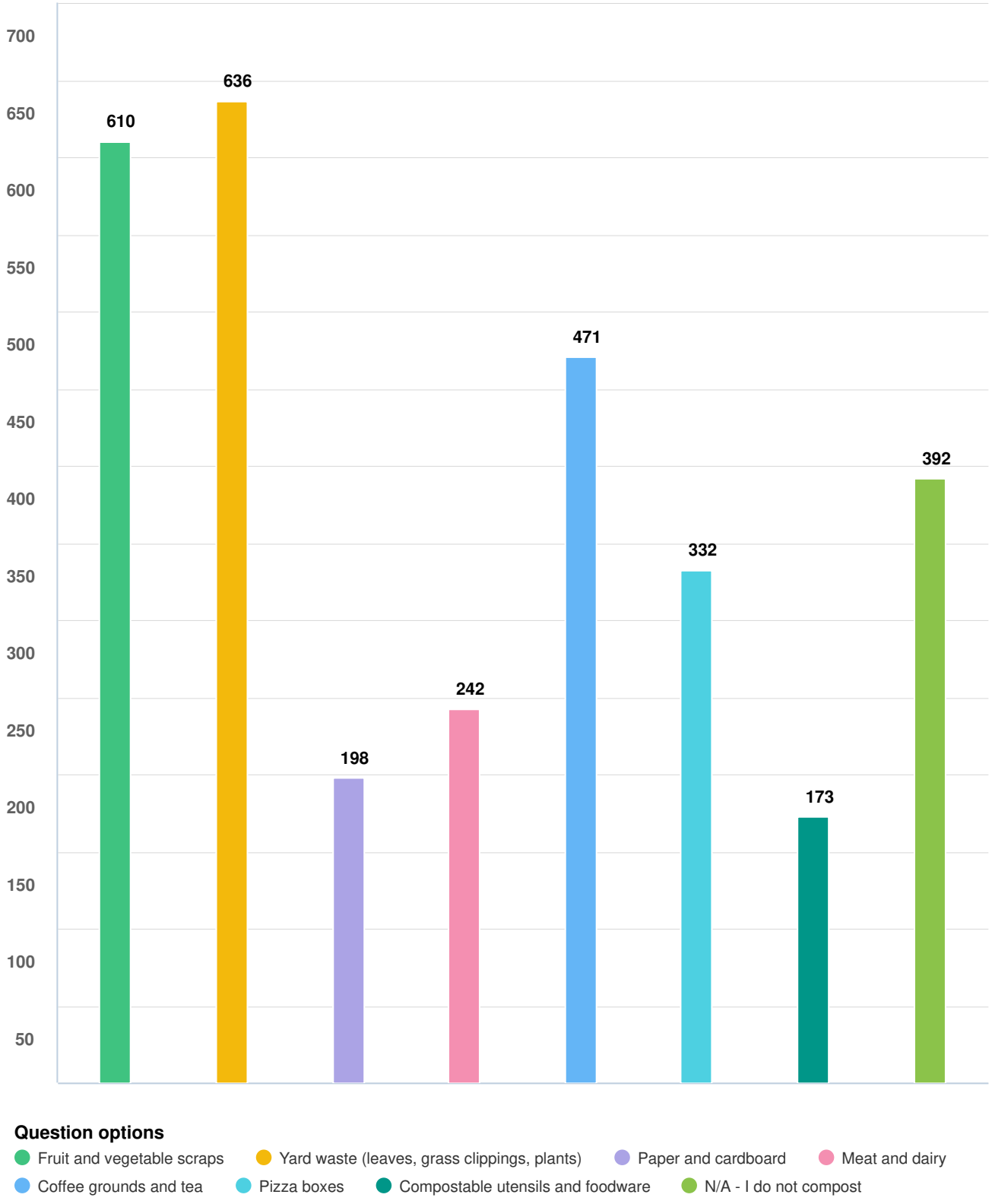


Question options

- Yes, I am a CompostAble subscriber
- Yes, I use the Village's public compost drop off sites
- Yes, I have a backyard compost pile
- No, I do not compost at all

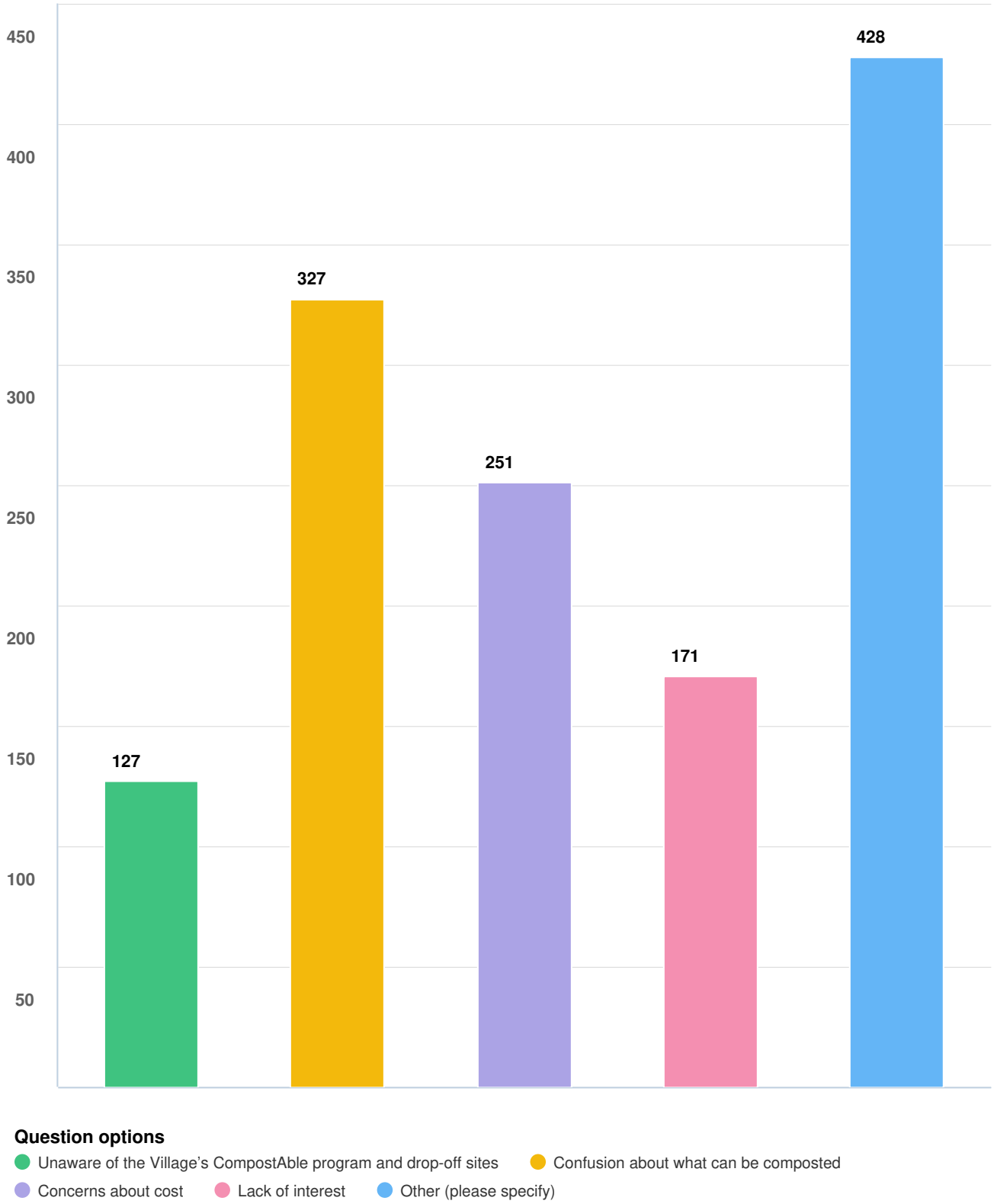
Mandatory Question (1118 response(s))
Question type: Radio Button Question

Q10 Which of the following materials do you most often compost? (Select all that apply)



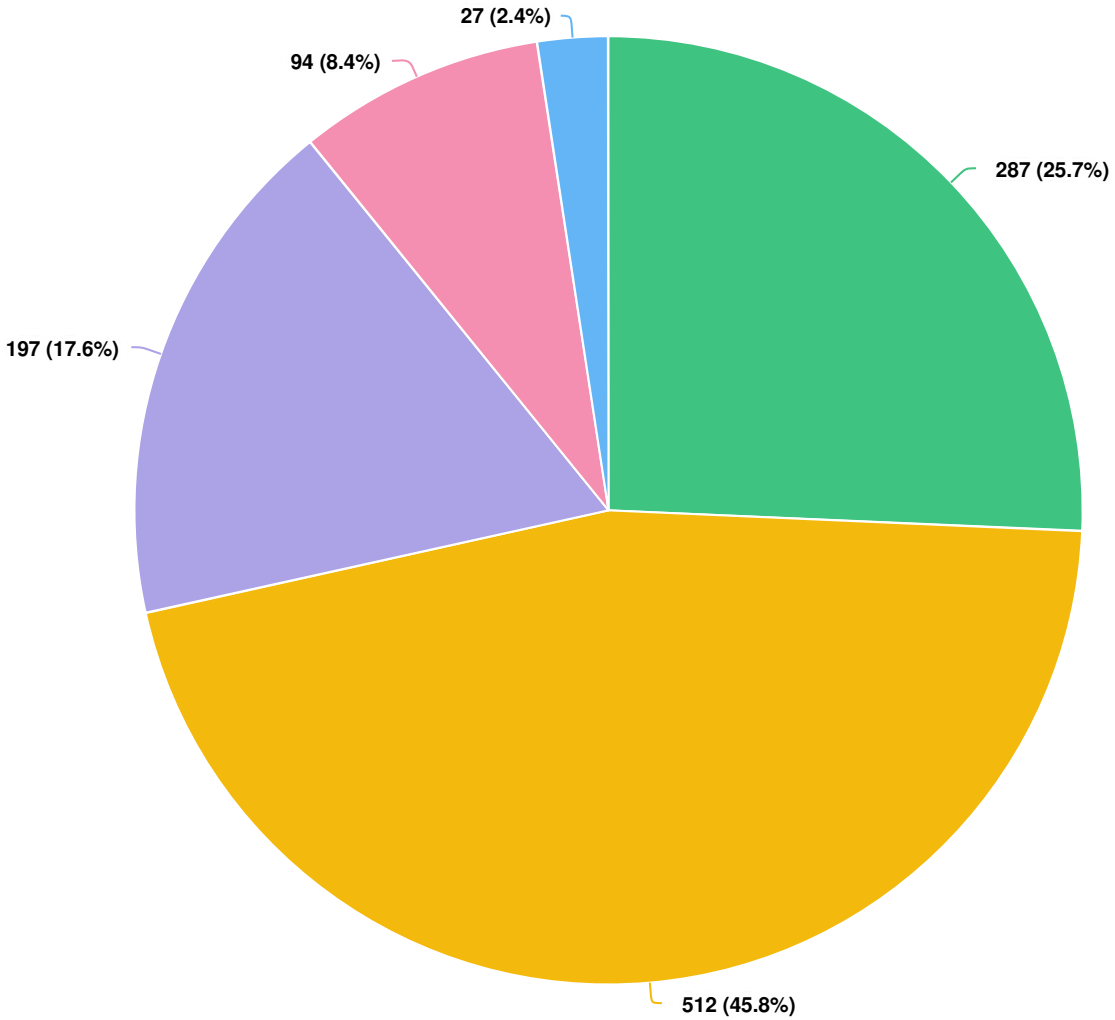
Mandatory Question (1118 response(s))
Question type: Checkbox Question

Q11 Which of the following barriers prevent you from composting more? (Select all that apply)



Mandatory Question (1118 response(s))
Question type: Checkbox Question

Q12 How satisfied are you with your current solid waste collection services?

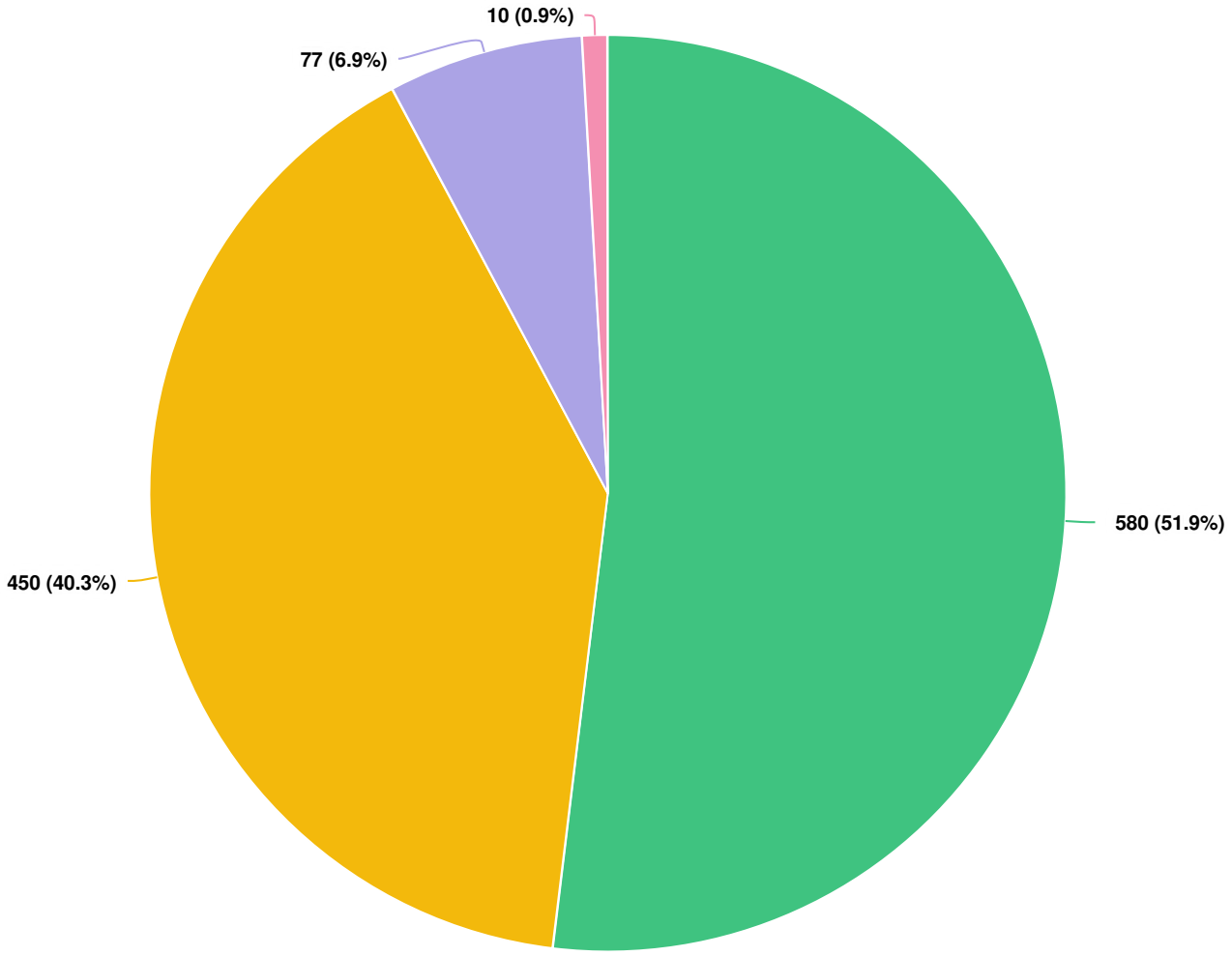


Question options

Very satisfied Satisfied Neutral Unsatisfied Very unsatisfied

Mandatory Question (1117 response(s))
Question type: Radio Button Question

Q13 How concerned are you about the environmental impact of solid waste?

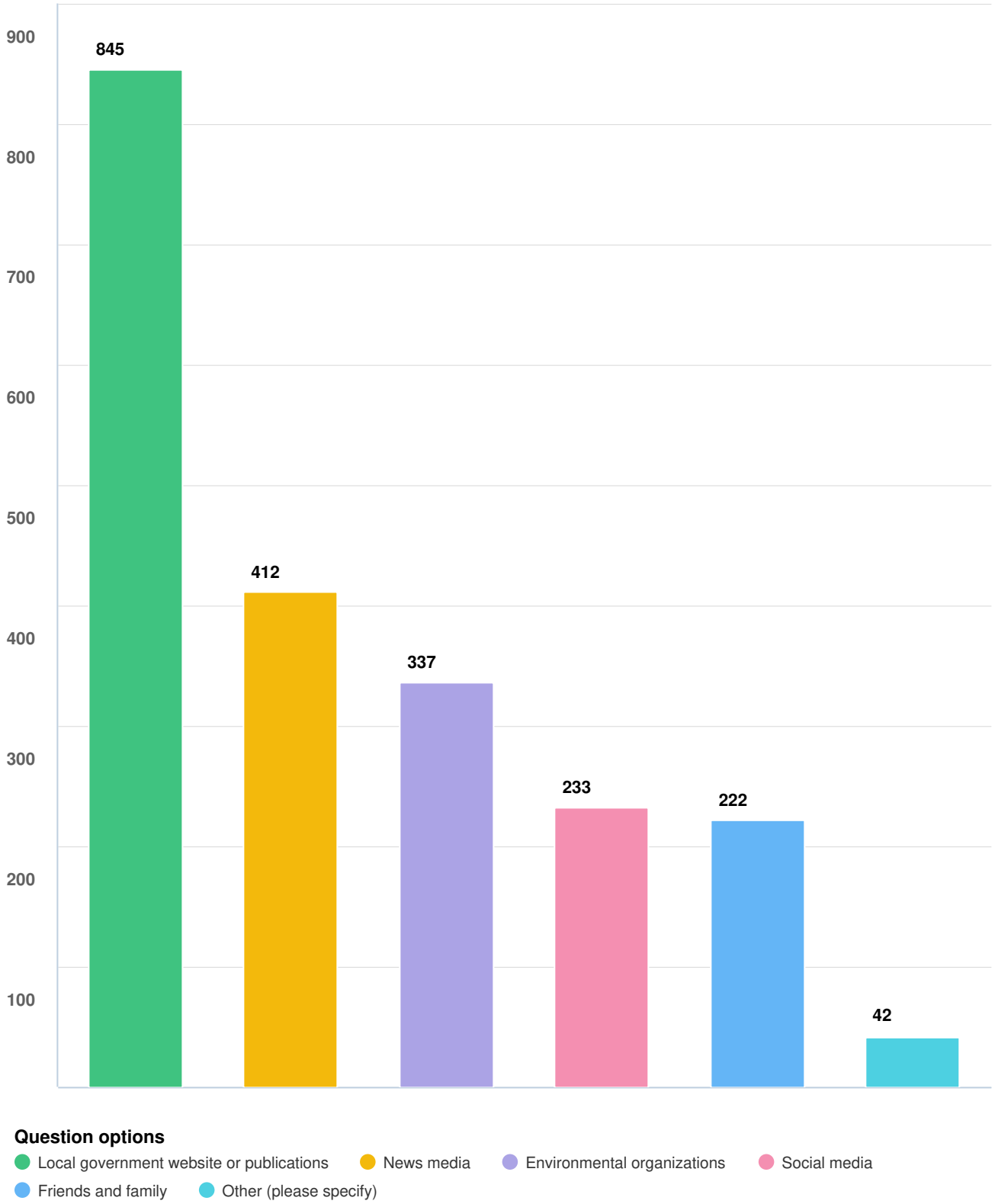


Question options

- Very concerned
- Somewhat concerned
- Not very concerned
- Not concerned at all

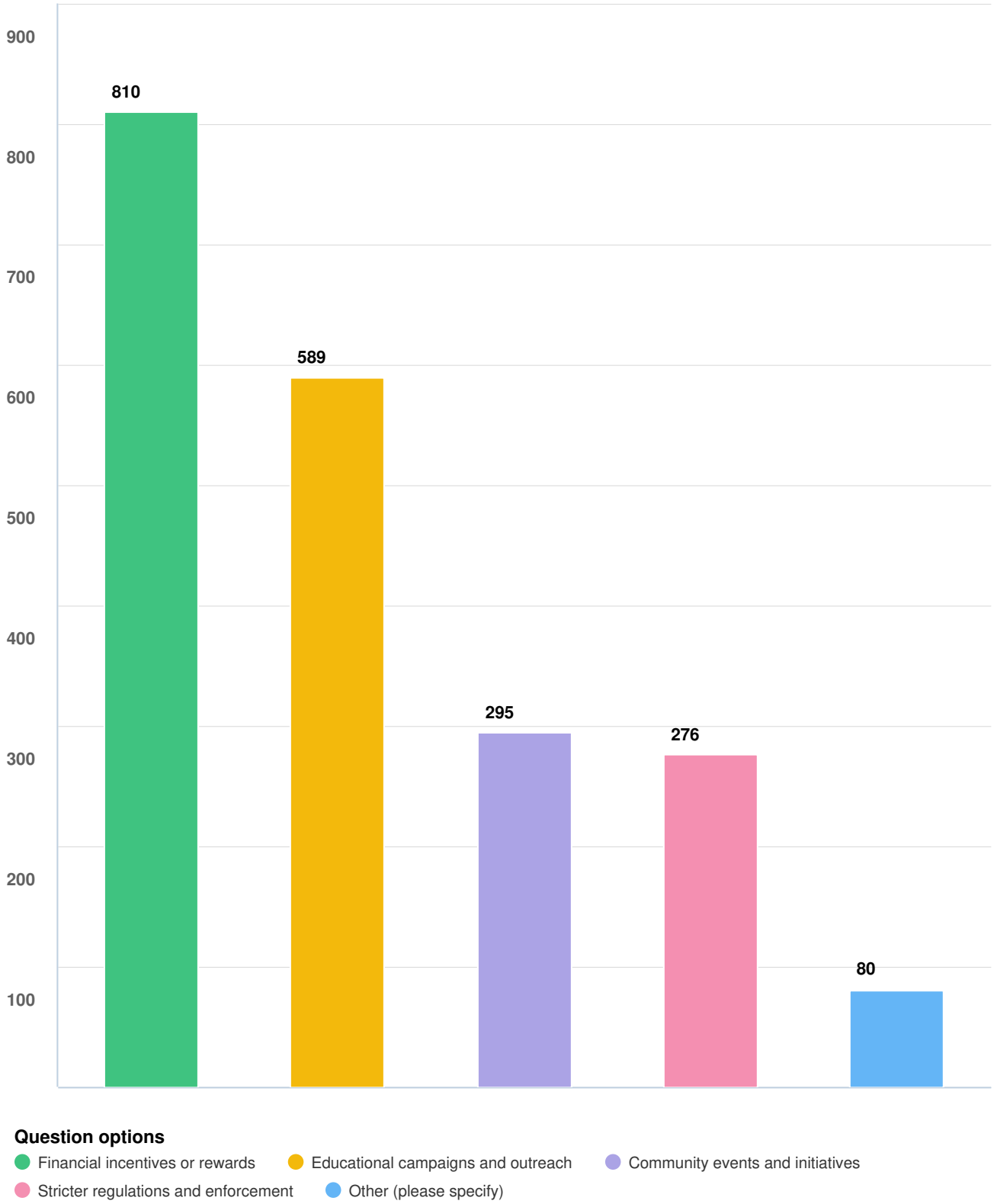
Mandatory Question (1117 response(s))
Question type: Radio Button Question

Q14 Where do you primarily get information about solid waste management and recycling? (Select all that apply)



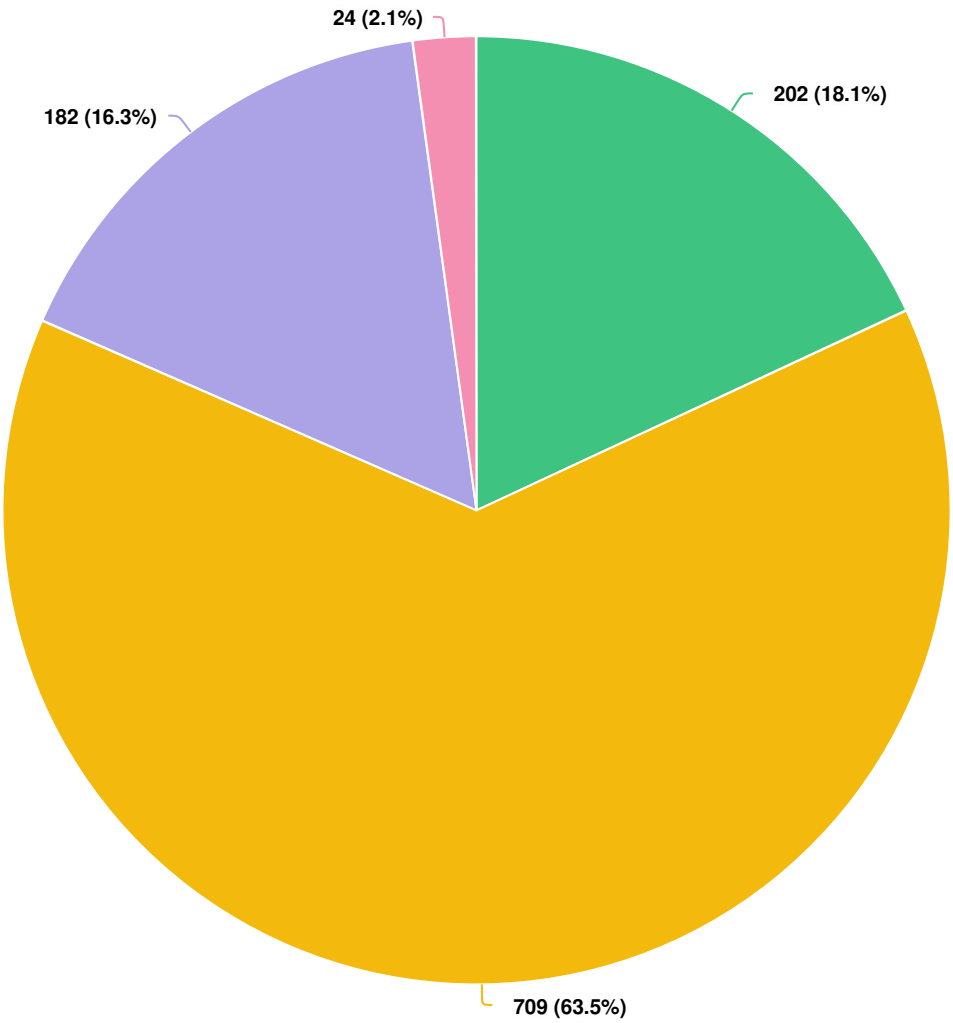
Mandatory Question (1117 response(s))
Question type: Checkbox Question

Q15 What do you think would be the most effective way to encourage public participation in waste reduction and recycling programs?



Mandatory Question (1117 response(s))
Question type: Checkbox Question

Q16 Do you feel optimistic about the future of solid waste management in your community?



Question options

- Yes, very optimistic
- Somewhat optimistic
- Somewhat pessimistic
- Very pessimistic

Mandatory Question (1117 response(s))
Question type: Radio Button Question