

---

# Waste Reduction Study

Prepared for

## Westchester County

Westchester County Department of Environmental Facilities  
270 North Ave, 6<sup>th</sup> Floor  
New Rochelle, NY 10801

January 2026

**Waste Reduction Study**  
Westchester County, NY

January 2026

Prepared for:

Westchester County Department of Environmental Facilities  
270 North Avenue, 6<sup>th</sup> Floor  
New Rochelle, New York 10801

Prepared by:

Barton & Loguidice  
247 Route 100, Suite 2000D  
Somers, New York 10589

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
<b>1.0 Introduction .....</b>	<b>1</b>
1.1. Definition of Zero Waste.....	1
1.2. New York State Regulatory Framework Guiding this Waste Reduction Study.....	2
1.3. Relevant County Laws and Policies.....	7
1.4. Relevant Local Municipal Initiatives .....	9
1.5. Waste Reduction Goals.....	10
<b>2.0 Existing System (Baseline).....</b>	<b>11</b>
2.1. District Recycling and Waste Management Facilities .....	12
2.2. Material Collection Programs .....	14
2.3. Education and Outreach .....	18
<b>3.0 Public Engagement and Outreach .....</b>	<b>20</b>
<b>4.0 Recommended Strategies for Waste Reduction and Diversion .....</b>	<b>30</b>
4.1. Strategy 1: Expand Organics Management (Both Food & Yard Waste Materials) .....	34
4.2. Strategy 2: Get Back to Basics – Recycling Education Campaign.....	36
4.3. Strategy 3: Increase Multi-Family Building Outreach .....	37
4.4. Strategy 4: Support Municipal and Commercial C&D Diversion.....	39
4.5. Strategy 5: Maximize Diversion from the Commercial Waste Stream .....	39
4.6. Strategy 6: Maximize the Benefits of Enforcement.....	40
4.7. Strategy 7: Support State-wide Extended Producer Responsibility.....	43
4.8. Strategy 8: Expand and Enhance Green Purchasing Opportunities.....	44
4.9. Strategy 9: Emerging Material Recovery Facility Technologies .....	46
4.10. Strategy 10: Promote Reuse and Repair Cafés .....	46
4.11. Strategic Takeaways .....	47
<b>5.0 Benchmarking Comparisons .....</b>	<b>49</b>
5.1. Stony Brook Report Key Findings.....	49
5.2. Relevant Case Studies .....	52
<b>6.0 Exploring Disposal Alternatives.....</b>	<b>59</b>
6.1. Traditional Waste-to-Energy Combustion .....	59
6.2. Pyrolysis .....	60
6.3. Gasification .....	61
6.4. Landfilling.....	61
6.5. Anaerobic Digestion.....	62
<b>7.0 Conclusion .....</b>	<b>63</b>
<b>8.0 Project Team Zero Waste Certifications .....</b>	<b>64</b>

**TABLE OF CONTENTS**

<b><u>Section</u></b>	<b><u>Page</u></b>
<b>Tables</b>	
Table 2-1: Racial Demographics of Westchester County .....	11
Table 2-2: DEF Permitted Facilities .....	13
Table 2-3: DEF Material Collection Programs .....	17
Table 4-1: Strategies Resource Needs and Expected Outcomes Summary .....	32
<b>Figures</b>	
Figure 1-1: DAC Considerations Grouping .....	5
<b>Appendices</b>	
Appendix A – List of Materials Accepted at the Household Material Recovery Facility (H-MRF)	
Appendix B – Public Participation Survey Data	
Appendix C - School Food Scraps Program Interest Survey Memo	

## 1.0 INTRODUCTION

Refuse Disposal District No. 1, under the management of the County of Westchester Department of Environmental Facilities (DEF), plays a pivotal role in overseeing waste management for thirty-six municipalities, encompassing approximately 90% of Westchester County's population of one million residents. In addition, DEF acts as the administrator of the designated planning unit for the geographic area of Westchester County, working to develop strategies both within and outside of the Refuse Disposal District No. 1 (the District).

The Westchester County Board of Legislators included funding in the 2024 Refuse Disposal District budget for a Waste Reduction Study. The timing of this funding allocation aligned with the recently released New York State Solid Waste Management Plan, which aims for an 85% recycling rate statewide by 2050. The County sought to expand its efforts by commissioning a Waste Reduction Study to evaluate environmental impacts and recommend innovative materials management strategies moving forward. This study serves as a comprehensive guide to achieving or surpassing the state's ambitious waste management goals, by integrating the principles of Zero Waste in DEF's planning and policy, and by recommending innovative materials management strategies while evaluating their environmental impacts. Through this initiative, the County has reaffirmed its commitment to reducing waste, conserving resources, minimizing greenhouse gas emissions, and promoting a circular economy.

The following Waste Reduction Study report details actionable strategies to address municipal and commercial waste streams. This study draws upon a comprehensive approach to data collection, incorporating insights from a variety of sources to ensure a well-rounded analysis. Public information sessions provided valuable community perspectives, while multiple surveys offered detailed quantitative and qualitative feedback from diverse stakeholders. Discussions with DEF staff members also contributed specialized knowledge and operational insights, further enriching the study's foundation. Additionally, current legislation served as a critical framework, guiding the analysis and recommendations. Together, these elements informed the study's findings in alignment with both community feedback and regulatory requirements. Building on the County's already proven waste reduction programs, this study provides a pathway for continued leadership in sustainable waste management.

### 1.1. Definition of Zero Waste

While neither the New York State Department of Environmental Conservation (NYSDEC) or the U.S. Environmental Protection Agency (EPA) has a single, specific definition of "Zero Waste," in general, Zero Waste refers to a forward-thinking philosophy and strategy aimed at reducing waste generation and maximizing recycling and reuse, with the ultimate goal of sending as little waste as possible to landfills and/or waste-to-energy facilities. The EPA also highlights community-driven actions and emphasizes conserving resources through responsible production, consumption, and recovery. The EPA's waste management hierarchy<sup>1</sup> prioritizes

---

<sup>1</sup> <https://www.epa.gov/smm/sustainable-materials-management-non-hazardous-materials-and-waste-management-hierarchy>.

strategies for managing waste in an environmentally responsible way and ranks methods from most to least preferred as follows:

1. Source Reduction and Reuse
2. Recycling and Composting
3. Energy Recovery
4. Treatment and Disposal



The hierarchy emphasizes reducing waste generation and maximizing resource recovery to minimize environmental impact. The recommendations in this study were developed with this hierarchy in mind, in collaboration with input from DEF, local environmental groups, commercial businesses and municipalities, the general public, and sustainable materials management planning expertise from Barton & Loguidice (B&L), a multidisciplinary environmental engineering and consulting firm headquartered in Syracuse, NY.

## 1.2. New York State Regulatory Framework Guiding this Waste Reduction Study

Several laws and ordinances are in place that support sustainable materials management and recycling efforts, providing the foundation for this report.

### 1.2.1. New York's Climate Leadership and Community Protection Act (CLCPA)<sup>2</sup>

The CLCPA enacted in 2019, is the state's ambitious framework for addressing climate change. It mandates significant reductions in greenhouse gas emissions – 40% by 2030, and 85% by 2050, relative to 1990 levels. The CLCPA focuses on reducing greenhouse gas emissions across various sectors, including the significant role of waste management in achieving these goals. The Plan aims to divert 85% of waste from landfills by 2050, to reduce methane emissions from waste decomposition.

Disadvantaged communities (DACs) were first identified as a result of the CLCPA to ensure that New York State's investments and actions to advance the Climate Law will benefit all communities and address climate inequities. For the purposes of this program, communities are evaluated by their census tract, which is a geographic unit defined by the U.S. Census Bureau. New York's Climate Justice Working Group (CJWG), comprised of representatives from State Agencies and Environmental Justice groups across the State, was formed to identify DACs. The CJWG plans to review the disadvantaged communities' criteria annually and make updates where necessary. In identifying DACs, CJWG considers forty-five indicators within seven factors within two components; Figure 1-1 is intended to serve as a visual reference for the grouping of these considerations.

<sup>2</sup> <https://www.nyrenews.org/clcpa?utm>, last accessed March 2025.

For each indicator, each census tract is assigned a value from the source dataset. Details on the scoring of the 45 indicators, including definition, data source, calculation method, and potential limitations, are available in Section 6.2 of the Technical Documentation<sup>3</sup>. As every indicator's raw data is measured in different units, a common scale to combine and compare data across indicators is needed.

Data is re-scaled by calculating a percentile rank for each census tract on each indicator; the results are the 45 indicator scores. Next, the seven factor scores are calculated as the weighted average of the indicator scores within each factor. Similarly, the two component scores are calculated as the weighted average of the factor scores within each component. All of the factors are weighted equally except for potential climate change risks, which is weighted double; the CJWG decided that environmental considerations should have the same weight as potential climate change risks. A combined score is calculated for each tract as the sum of the two component scores. Each tract is then assigned a combined score percentile rank. A tract's combined score percentile rank is defined as either its statewide combined score percentile rank, or its regional (NYC or rest-of-state) combined score percentile, whichever is highest.

**If the tract's combined score percentile rank is greater than 71.7, then that tract is designated as a DAC.**

The following are key takeaways about DACs:

- Because DACs are identified on a percentile basis, there will always be the same number of DACs (35% of tracts in New York State).
- As criteria are reviewed annually, changes to which tracts are designated as DACs are expected.
- The State's purpose in identifying DACs is to help state agencies prioritize funding.

Using the DAC designation methodology described above, an analysis was conducted for the City of Peekskill (Census Tract 36119014100), which is the location of the WIN Waste Waste-to-Energy Facility where District, along with other private waste, is managed. As of March 22, 2023, when the DAC attributes were last updated, the Tract 36119014100 has a combined score percentile rank of 99.3; this rank is above the 71.7 threshold, thus, the Tract 36119014100 is designated as a DAC. The ten indicators that are most responsible for this designation and their respective scores are:

1. Projected flooding in inland areas (97.7)
2. Energy poverty or cost burden (94.0)
3. Heart attack (MI) hospitalization (93.2)
4. Proximity to regulated management plan (RMP) sites (91.9)

---

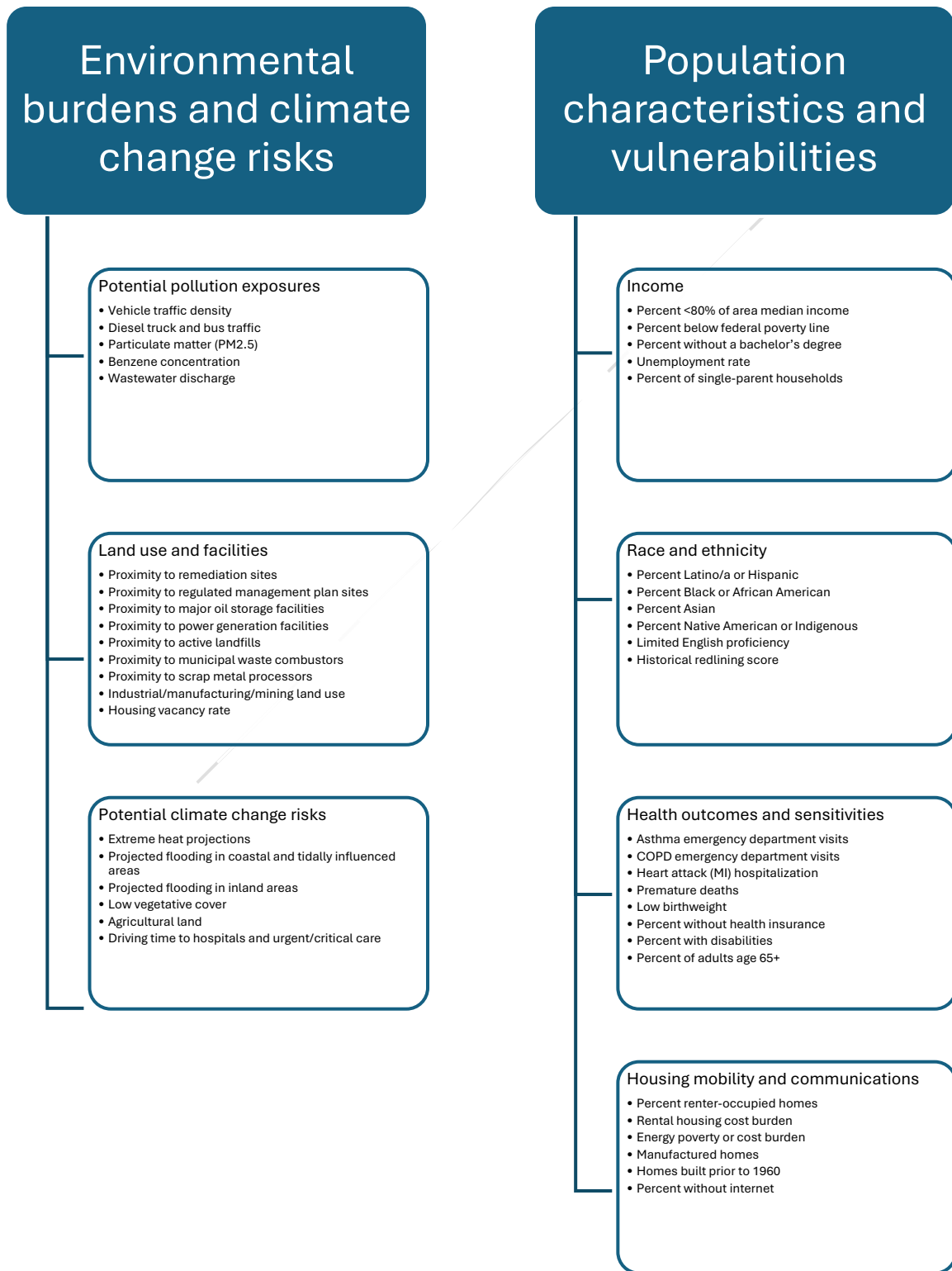
<sup>3</sup> <https://climate.ny.gov/-/media/Project/Climate/Files/Disadvantaged-Communities-Criteria/Technical-Documentation-on-the-Disadvantaged-Communities-Criteria---Final-Version.pdf>

5. Proximity to municipal waste combustors (91.7)
6. Percent without internet (89.4)
7. Rental housing cost burden (87.4)
8. Proximity to remediation sites (87.3)
9. Percent less than 80% of area median income (86.4)
10. Percent Latino/a or Hispanic (86.4)

Hypothetically, for the Tract to have a combined score percentile rank below the 71.7 threshold without altering the scores of any other indicators, nine out of these ten indicators would need to have scores of zero. Thus, **none of these indicators individually cause the Tract to be designated as a DAC**. However, the indicator primarily responsible is the projected flooding in inland areas, as it has the highest score out of all the indicators, and is within the potential climate change risks factor, which is weighted double that of the other factors within the environmental burdens and climate change risks component.

In accordance with CLCPA and existing NYSDEC solid waste facility permit application requirements, DEF must consider specific environmental justice implications prior to siting any new facilities.

Figure 1-1: DAC Considerations Grouping



### **1.2.2. New York State Solid Waste Management Plan 2023-2032: “Building the Circular Economy through Sustainable Materials Management”<sup>4</sup>**

The New York State Solid Waste Management Plan (Plan) emphasizes minimizing waste generation by encouraging practices such as product reuse, repair, and sustainable consumption. Initiatives include public education campaigns, support of community programs for material reuse, improving collection systems and investing in infrastructure to process recyclable materials efficiently, product stewardship and Extended Producer Responsibility (EPR), organics reduction and recycling, toxics reduction in products, and advanced design and operation of solid waste management facilities. A key objective of the plan is to achieve an 85% state recycling rate by 2050, significantly reducing the volume of waste sent to landfills.

### **1.2.3. Packaging Reduction and Recycling Infrastructure Act<sup>5</sup>**

The Packaging Reduction and Recycling Infrastructure Act is a proposed bill aimed at reducing single-use plastic packaging in New York. It would require companies above a certain income threshold to reduce their plastic packaging by 30% over the next 12 years and ensure that remaining plastic materials are more easily recyclable. Supporters, including environmental groups and lawmakers, argue that the bill would significantly curb plastic waste and promote a circular economy. However, opponents claim it could be costly and ineffective, particularly criticizing its lack of consideration for “advanced recycling,” a high-energy chemical recycling method that many environmentalists oppose. The bill cleared both the Senate and Assembly Environmental Conservation committees in this year’s session; however, it did not pass both houses within the session deadline. There have been multiple versions of this bill with slight differences introduced over several years.

### **1.2.4. NYS Food Donation and Food Scraps Recycling Law<sup>6</sup>**

The Food Donation and Food Scraps Recycling law went into effect on January 1, 2022, requiring food scraps generators of at least two tons per week, or designated food scraps generators (DFSGs), to donate edible food scraps and recycle inedible food scraps if located within 25 miles of an organics recycling facility with capacity. The law was amended in 2024 to:

1. Raise the inedible food scraps recycling threshold from 25 miles to 50 miles proximity to an organics recycler with capacity, effective January 1, 2027; and

---

<sup>4</sup> <https://dec.ny.gov/environmental-protection/waste-management/solid-waste-management-planning?utm>, last accessed 3/27/2025.

<sup>5</sup> <https://www.timesunion.com/capitol/article/lawmakers-renew-push-key-climate-bills-20230044.php?>, last accessed 3/27/2025.

<sup>6</sup> <https://dec.ny.gov/environmental-protection/recycling-composting/organic-materials-management/food-donation-scraps-recycling-law>, last accessed 3/27/2025.

2. Lower the food waste generation threshold from 2 tons per week to 1 ton per week, effective January 1, 2027, and 0.5 tons per week, effective January 1, 2029.

### 1.3. Relevant County Laws and Policies

In addition to state laws, Westchester County itself has enacted several laws and ordinances to promote waste reduction and recycling. Key regulations include:

#### 1.3.1. Source Separation Law (Chapter 825)<sup>7</sup>

This law mandates the separation of recyclable materials from other solid waste to facilitate recycling and reduce waste. In 2024, the Source Separation Law was updated to include the following provisions for nonresidential waste generators, which are enforceable by DEF:

1. Separate disposal and recycling receptacles, placed near each other and available on each floor, in each area, and in any food service area accessible to the public and/or visitors;
2. The separate recycling receptacles shall be either single stream or dual stream, based upon the location's waste management plan;
3. The receptacles must be clearly marked and identifiable to avoid the improper mixing of solid waste and recyclables; and
4. DEF shall be allowed reasonable access to perform inspections of areas referenced in this section.

#### 1.3.2. Solid Waste and Recyclables Collection Licensing (Chapter 826-a)<sup>8</sup>

This ordinance established licensing requirements for individuals and companies involved in the collection, transportation, and disposal of solid waste and recyclables within the County. It aims to regulate waste management activities to ensure compliance with environmental standards. The Westchester County Solid Waste Commission is responsible for the implementation and administration of the Solid Waste and Recyclables Collection Licensing Law.

#### 1.3.3. Plastic Carryout Bag Recycling (Chapter 828)<sup>9</sup>

This regulation requires stores to collect, transport, and recycle plastic carryout bags in accordance with applicable laws. It aims to reduce plastic waste by ensuring that plastic

---

<sup>7</sup> <https://environment.westchestergov.com/laws/source-separation-law>, last accessed 3/27/2025.

<sup>8</sup> [https://library.municode.com/ny/westchester\\_county/codes/code\\_of\\_ordinances?nodeId=PTVIIRUREDEENFA\\_CH826-ASOWARECOLI](https://library.municode.com/ny/westchester_county/codes/code_of_ordinances?nodeId=PTVIIRUREDEENFA_CH826-ASOWARECOLI), last accessed 3/27/2025.

<sup>9</sup> [https://library.municode.com/ny/westchester\\_county/codes/code\\_of\\_ordinances?nodeId=PTVIIRUREDEENFA\\_CH828ORREPR\\_PLBA\\_S828.06SE&utm](https://library.municode.com/ny/westchester_county/codes/code_of_ordinances?nodeId=PTVIIRUREDEENFA_CH828ORREPR_PLBA_S828.06SE&utm), last accessed 3/27/2025.

bags are properly recycled. This regulation was preempted by the New York State Bag Waste Reduction Act<sup>10</sup>, which took effect in 2020 and prohibits the distribution of plastic carryout bags with certain exemptions.

#### **1.3.4. "Upon Request" Single-use Foodware Law (Chapter 542)<sup>11</sup>**

This legislation aims to reduce the consumption of single-use plastics by limiting the use of single-use foodware products to only when specifically requested by the customer. Additionally, the law prohibits the use of certain single use plastic items. This legislation applies to ordering in person, online, and through a food delivery app and states:

1. No food service establishment shall provide single-use foodware or condiment packets to any dine-in or take-away customer unless specifically requested;
2. Single-use plastic beverage stirrers or single-use plastic beverage "splash sticks" are no longer permitted. Retail stores may sell packages or boxes of single-use plastic beverage stirrers or single-use plastic beverage splash sticks; and
3. When requested, single-use foodware items or condiment packets must be provided individually and not in a package containing multiple items.

#### **1.3.5. Expanded Polystyrene Food Service and Packaging Waste Reduction Law (Chapter 540)<sup>12</sup>**

The Expanded Polystyrene (EPS) Food Service and Packaging Waste Reduction Law prohibits the use of EPS in single-use food service items and loose-fill packaging within Westchester County. The ban applies to vendors, retailers, and mobile food commissaries, with exceptions for packaging fresh produce, raw eggs, fish, and meat products. Electronics packaging using EPS was also phased out unless pre-packaged prior to entering the store. Enforcement of the law falls under the County Board of Health, which has the authority to issue fines for violations. This Law was preempted by the New York State Expanded Polystyrene Foam Containers and Polystyrene Loose Fill Packaging Ban<sup>13</sup>, which took effect in 2022 and banned the sale and distribution of expanded polystyrene foam disposable food service containers and polystyrene loose fill packaging.

---

<sup>10</sup> <https://dec.ny.gov/environmental-protection/recycling-composting/bag-waste-reduction-law>, last accessed September 2025.

<sup>11</sup> [https://library.municode.com/ny/westchester\\_county/codes/code\\_of\\_ordinances?nodeId=PTIVOTLOLAACRE\\_CH542SIEFOLA](https://library.municode.com/ny/westchester_county/codes/code_of_ordinances?nodeId=PTIVOTLOLAACRE_CH542SIEFOLA), last accessed April 2025.

<sup>12</sup> Source: Chapter 540 of Westchester County's Code of Ordinances: [https://librarystage.municode.com/ny/westchester\\_county/codes/code\\_of\\_ordinances?nodeId=PTIVOTLOLAACRE\\_CH540EXP\\_OFOSEPAWARE](https://librarystage.municode.com/ny/westchester_county/codes/code_of_ordinances?nodeId=PTIVOTLOLAACRE_CH540EXP_OFOSEPAWARE), last accessed May 2025.

<sup>13</sup> <https://dec.ny.gov/environmental-protection/recycling-composting/go-foam-free>, last accessed September 2025.

### 1.3.6. Lithium Battery Law (Chapter 542)<sup>14</sup>

Lithium Battery Legislation restricts the sale of lithium-ion batteries for electric mobility devices to only those that meet UL safety standards. The law also prohibits the sale of reassembled or damaged batteries. The County's Department of Consumer Protection oversees enforcement, with fines up to \$1,000 per violation. Additionally, Westchester's Department of Emergency Services implemented a Lithium-Ion Battery Safety Program in partnership with DEF, aiming to ensure proper disposal and handling of lithium-ion batteries.

### 1.3.7. Environmental Justice Legislation and Policies

In 2023, County Executive George Latimer signed several environmental policies including:

1. The Lead Free Parks Act creating a process for monitoring and remediating drinking water in all County parks to ensure safety;<sup>15</sup>
2. The Addressing Asthma in Communities of Color Amendment to the Laws of Westchester County Section 277.421 establishing a subcommittee of the African-American Advisory Board dedicated to studying the high rates of Asthma in communities of color;<sup>16</sup>
3. The Renewable Energy Database Act assisting municipalities to create more renewable energy by establishing a County-managed database of potential siting locations for renewable energy infrastructure on municipal property;<sup>17</sup> and
4. The Equity in Environmental Legislation Act to provide all communities with equitable access when the County is considering any new environmental law, regulation, or policy.<sup>18</sup>

## 1.4. Relevant Local Municipal Initiatives

Within Westchester, local municipalities manage the collection of waste and curbside recyclables and determine participation in District programs, or the establishment of separate, local programs. The flexibility of offering optional additional waste programs allows municipalities to address local waste management needs with District support. This local

---

<sup>14</sup>[https://librarystage.municode.com/ny/westchester\\_county/codes/code\\_of\\_ordinances?nodeId=PTIVOTLOLAACRE\\_CH542SIE\\_FOLA\\_CH542RELINBA](https://librarystage.municode.com/ny/westchester_county/codes/code_of_ordinances?nodeId=PTIVOTLOLAACRE_CH542SIE_FOLA_CH542RELINBA)

<sup>15</sup> <https://westchestercountyny.legistar.com/View.ashx?M=F&ID=12394860&GUID=E68E7F1B-21C0-48C2-A031-A275B5DB1E68>, last accessed September 9, 2025.

<sup>16</sup> <https://westchestercountyny.legistar.com/View.ashx?M=F&ID=12281400&GUID=568193ED-B357-44C6-9263-030AF34652CF>, last accessed September 9, 2025.

<sup>17</sup> <https://westchestercountyny.legistar.com/View.ashx?M=F&ID=12394922&GUID=894C5DFC-C0F9-4ECF-8ECC-40DC83A55D5B>, last accessed, September 9, 2025.

<sup>18</sup> <https://westchestercountyny.legistar.com/View.ashx?M=F&ID=12394923&GUID=8B1DAD19-5DFC-44F3-B1BB-19B3C35C1BE7>, last accessed September 9, 2025.

discretion enables communities to tailor initiatives to their specific needs and priorities, often resulting in innovative and complementary efforts throughout the County.

For example:

- **Scarsdale** has implemented various small-scale waste management programs to address local concerns (i.e., cork recycling, food waste oil recycling, tennis ball recycling), and an annual compost giveback event for residents.
- **White Plains** has enacted restrictions on single-use plastic foodware, aligning with broader County goals to reduce plastic waste and promote reusable alternatives.
- **Yonkers** has piloted curbside food scrap collection, participates in the PaintCare program as a designated drop-off location for paint recycling, and provides Styrofoam recycling services, demonstrating a multifaceted approach to local waste diversion.

These examples demonstrate the crucial role that municipal action plays in promoting waste reduction and circular economy objectives throughout Westchester County.

### **1.5. Waste Reduction Goals**

With this Waste Reduction Study, it is the County's ultimate goal to advance waste reduction strategies for the next ten years designed to meet or exceed what is outlined in the NYSDEC Solid Waste Management Plan. This study intends to build upon DEF's already successful programs, and yield further countywide waste reduction from residential, municipal, and commercial waste streams.

Environmental Justice initiatives aimed at ensuring equitable treatment of all communities, particularly those historically impacted by environmental hazards, will be a priority focus of this study's recommendations. The County's current policy approach to Environmental Justice includes the Equity in Environmental Legislation Act designed to promote equitable access for all groups when new environmental laws are considered.

## 2.0 EXISTING SYSTEM (BASELINE)

Westchester County, NY has an estimated population of 1,006,447 as of July 1, 2024, reflecting a modest 0.2% increase since 2020. The County maintains a diverse demographic profile, with 21% of its residents under the age of 18, and 19% aged 65 or older. Approximately 25% of the population is foreign-born, contributing to the County's rich cultural and economic landscape. Westchester County also boasts a median household income of \$118,411, highlighting the County's relatively high-income demographic<sup>19</sup>. Racial and ethnic diversity is a defining characteristic of Westchester County, as illustrated in the table below.

**Table 2-1: Racial Demographics of Westchester County<sup>20</sup>**

Identified Race	Population Percentage
White alone	53.08%
Black or African American alone	14.05%
American Indian and Alaska Native alone	0.74%
Asian alone	6.54%
Native Hawaiian and Other Pacific Islander alone	0.03%
Some Other Race alone	14.63%
Two or more races	10.93%

This diversity underscores the importance of incorporating environmental justice principles into waste reduction planning. Some communities in the County may face disproportionate exposure to environmental burdens such as air pollution or limited access to waste diversion services, which reinforces the need for targeted outreach, equitable program design, and inclusive policy development. The County's population and demographic composition are not expected to shift significantly over the next decade, making it critical to address existing disparities through sustained investment in community-responsive waste reduction strategies.

Overall, the programs and facilities managed by DEF at present demonstrate an integrated and proactive approach to waste reduction and sustainability. Of particular note, there are several programs focusing on specialized waste streams such as e-waste, textiles, hazardous materials, and organic yard and food waste, which reflect the overarching goal to divert some of the most significant estimated components of the solid waste stream (textiles and food in particular), and some of the most hazardous waste materials (electronic waste), from final disposal sites. Additionally, the County is invested in community engagement through efforts such as the CompostED and MRF tours, Household Recycling Day events, Compost Giveback events, the Recycling HelpLine, the annual Eco Awards ceremony, the Inspection Program, and participation in local municipal and community events, which demonstrate robust resident participation and public awareness in achieving waste diversion goals. As a result of these

<sup>19</sup> <https://data.census.gov/>

<sup>20</sup> <https://data.census.gov/table/DECENNIALPL2020.P1?g=050XX00US36119>

robust efforts, Westchester County consistently achieves an annual recycling rate of at least 50%,<sup>21</sup> which is considerably higher than the current New York State average recycling rate of 43%,<sup>4</sup> and establishes a tangible basis for future planning.

Presently, the District employs several diverse strategies that span infrastructure, collection programs, education, and legislation to manage waste effectively. The following sections illustrate a comprehensive overview of several existing programs and facilities related to waste management and recycling that are managed by DEF.

## **2.1. District Recycling and Waste Management Facilities**

### **2.1.1. Daniel P. Thomas Material Recovery Facility (MRF)**

The Daniel P. Thomas MRF processes approximately 64,000 tons of dual-stream<sup>22</sup> recyclables annually, but is permitted to process up to 91,000 tons of recyclables annually. Items delivered and processed at the MRF, which are then sold to recyclers, include: aluminum (cans and foil), ferrous metals, food and beverage cartons (gable top and shelf-stable aseptic), plastics (coded 1–7), plastic boat wrap, newspaper, corrugated cardboard, and assorted paper, including office paper and paper collected by DEF's three Mobile Shredders. Recyclables are collected at the MRF as dual-stream: commingled containers and paper products.

### **2.1.2. Westchester County Household Material Recovery Facility (H-MRF)**

The H-MRF accepts hazardous household materials, e-waste, and other items requiring special handling from Westchester County residents year-round, Tuesday through Saturday. An exhaustive list of materials accepted at the H-MRF is included in Appendix A. The Facility also accepts hazardous chemicals and fluorescent bulbs from any school, institution, or business that qualifies as a Conditionally Exempt Small Quantity Generator (CESQG), on the first Thursday of every month. Medications are also accepted from residents and police stations on the first Tuesday of every month and on National Prescription Drug Takeback days.

### **2.1.3. Transfer Stations**

Transfer stations consolidate solid waste and recyclables for transport to disposal or other processing facilities. The District's transfer stations include: Daniel P. Thomas Material Recovery Facility/Thruway Transfer Station, Brockway Place Transfer Station, South Columbus Transfer Station, and Westchester County Northern Tier Recyclables Transfer Station. Collectively, these facilities handle significant amounts of recyclables, as outlined in the following table.

---

<sup>21</sup> NYSDEC 2024 Annual Report

<sup>22</sup> Within the District, dual-stream recycling involves separate disposal receptacles for pulp/paper and separate disposal receptacles for comingled bottles/can/cartons.

**Table 2-2: DEF Permitted Facilities**

<b>Facility</b>	<b>Waste diversion benefits</b>	<b>DEF Operational Expenses</b>	<b>Participants' Direct Cost</b>
<b>Material Recovery Facility (MRF)</b>	~64,000 tons of recyclables annually		No tip fee for recyclables; \$34.14 per ton for MSW (subsidized by DEF)
<b>Household Material Recovery Facility (H-MRF)</b>	~514 tons HHW, e-waste, bulk metal, etc. annually	\$0.47 per lb material and \$1,845 shift cost	Free to District residents and small fee for County residents not within the District.
<b>Brockway Place Transfer Station</b>	~4,000 tons of commingled paper annually	\$116.72 per ton for MSW	No tip fee for recyclables; \$34.14 per ton for MSW (subsidized by DEF)
<b>South Columbus Transfer Station</b>	~6,000 tons of commingled paper annually	\$116.72 per ton for MSW	No tip fee for recyclables; \$34.14 per ton for MSW (subsidized by DEF)

## 2.2. Material Collection Programs

Depending on the municipality, collection programs may include curbside collection, drop-off, or specialized collection services.

In addition to typical household recycling items, the materials collected for recycling through these programs include electronic waste items, textiles, confidential documents for shredding, organic yard waste, and lithium-ion batteries. Programs like e-waste recycling divert approximately 700 tons annually, showcasing robust efforts to address specialized waste streams.

### 2.2.1. Residential Food Scrap Transportation and Disposal (RFSTAD)

The District's Residential Food Scrap Transportation and Disposal (RFSTAD) program, launched in 2020 by DEF, was designed to reduce the financial barriers municipalities face when implementing food scrap recycling. Under RFSTAD, participating municipalities receive subsidized rates for the transportation and disposal of food scraps, making these programs more accessible and cost-effective. This subsidized rate makes the processing of food scraps cost neutral, or provides cost savings, when compared with municipal costs to process municipal solid waste. At this time, 26 District Municipalities participate in RFSTAD. The current contracted organics recycler is CRP Sanitation and the material is composted within Westchester County (Cortlandt) by CRP Sanitation. In 2024, 26 participating municipalities recycled 1,164 tons of food scraps.

Several municipalities have successfully launched or expanded food scrap recycling programs through RFSTAD, including:

- White Plains began food scrap collections as a participant of RFSTAD and the City continues to operate a voluntary residential food scrap drop-off program. Residents can bring food scraps to a local compost site modeled after the District's CompostED site. The City's participation in RFSTAD helped lay the ground work for the successful City-run food scrap program.
- Yonkers, the largest municipality in Westchester County, has implemented both drop-off and curbside food scrap collection in select areas as part of RFSTAD. Yonkers provides residents with starter kits and weekly curbside pickup. As part of the RFSTAD program, the processing costs of the material are offset by the District. Yonkers also purchases and distributes finished compost to residents, reinforcing the circular benefits of the program.
- Scarsdale is a member of RFSTAD and collects food scraps curbside. As part of the RFSTAD program, the processing costs of the material are offset by the District.
- Other municipalities participating in RFSTAD offer compost starter kits for a cost, and at times will even raffle them off at various outreach events. It is noted that there is no special kit required to participate in RFSTAD.

These examples demonstrate how RFSTAD has enabled municipalities to expand organics diversion efforts while minimizing fiscal impacts. By leveraging District support, local governments can offer residents meaningful opportunities to reduce waste and contribute to regional sustainability goals.

#### **2.2.2. Organic Yard Waste IMA Program**

District Municipalities have the ability to opt-in to participate in the Organic Yard Waste Program. Participating municipalities collect yard waste at their municipal depot or deliver it to another participating municipal yard. The District arranges for collection from the depot and transports it to commercial composting facilities. As an economic incentive to divert yard waste from the solid waste stream, District member municipalities pay less per ton for collected yard waste than for disposal of municipal solid waste. Municipalities that currently host an Organic Yard Waste Transfer Station include: Briarcliff Manor, Cortlandt, Croton, Eastchester, Greenburgh, Harrison, Irvington, Larchmont, Village and Town of Mamaroneck, Mt. Kisco, Mt. Vernon, New Rochelle, Ossining Village, Port Chester, Rye City, Scarsdale, Sleepy Hollow, Tarrytown, White Plains, Yonkers. By hosting a site, these municipalities also agree to accept yard waste from neighboring municipalities. In 2024, 92,829 tons of material were collected.

#### **2.2.3. Household Recycling Days**

Household Recycling Days (HRDs) offer an opportunity for residents to recycle household items like expired or excess medications, chemicals, paint, electronics, tires, bulk metal, and textiles (clothing, footwear, handbags, linens, leather, small area rugs) in one central location at no cost. HRDs offer the same services as the H-MRF, but in locations across the County, increasing access for County residents. In 2024, 5 Household Recycling Days were held, attracting over 2,861 households, and disposing of over 264,893 pounds of materials.

#### **2.2.4. Medication Take-Back**

Residents are able to drop off unwanted or expired medications at the H-MRF on the first Tuesday of every month, on National Prescription Drug Take Back days, and at HRDs. Westchester County Department of Public Safety personnel supervises the transportation of the collected medications to the Waste-to-Energy Facility in Peekskill for destruction, as required by the NYSDEC for proper disposal. In addition, many Westchester County Police Departments host MedReturn Units at their stations and deliver collected medications to the H-MRF. These MedReturn Units allow residents to drop off unwanted medications confidentially and conveniently, 24/7. In 2024, 9,027 pounds of medication waste was collected and disposed of from the H-MRF, including the medications delivered by Westchester County Police Departments, and HRD events.

**2.2.5. Mobile Shredder**

DEF operates three Mobile Shredders and conducts shredding events at various locations throughout the County. Residents are permitted to bring up to four file-size boxes of personal papers to these events to be shredded and recycled. In 2024, DEF hosted 95 residential events and serviced 11,593 households who delivered 204 tons of paper for shredding. The Mobile Shredders are also available at the County's 5 different Household Recycling Day events and at the H-MRF. Across the 5 events, an additional 16 tons of paper were collected for shredding.

**2.2.6. Boat Wrap Recycling**

In 2024, 18 marinas and boat yards along the Long Island Sound and the Hudson River operated as designated collection points. DEF collected and transported 45 tons of boat plastic wrap to the MRF to be marketed to recyclers.

**2.2.7. Electronic Waste (E-Waste) Recycling**

DEF provides e-waste collection containers at 27 District municipal sites in addition to the H-MRF and Household Recycling Day events, where residents can dispose of their unwanted electronics. In 2024, the County diverted approximately 700 tons of e-waste from the solid waste stream through this program.

**2.2.8. Textile Recycling**

Residents have the opportunity to recycle a variety of textiles (clothes, shoes, towels, rugs and more) in any condition (torn, worn, stained, broken zippers, etc.) as long as they are clean, dry, and odorless. In 2021, DEF expanded this program by installing 3 new bins at the H-MRF through a partnership with HELPSNY. DEF further expanded this program to allow municipalities to opt-in to curbside collection in 2024. In 2024, residents delivered 34,858 pounds of textiles to the H-MRF for recycling. The curbside program allows residents to schedule pick-up of textiles directly from their homes. In 2024, 17 municipalities utilized the program and 71,876 pounds of textiles were collected curbside.

**2.2.9. Lithium-Ion Battery Collection**

DEF established a system to accept damaged lithium-ion batteries from local municipal Fire Departments within the District who receive training from the County's Department of Emergency Services on the proper handling of damaged lithium-ion batteries. In 2024, DEF received damaged batteries from 18 fire departments across the County. Additionally, the HMRF received 5,579 total batteries, (about 1,985 pounds), 81 of which were damaged batteries, from residents. Residents have been, and continue to be, able to drop off intact and damaged lithium-ion batteries at the H-MRF. Safety videos and flyers were developed and shared to ensure residents were aware of the potential dangers associated with damaged lithium-ion batteries and the safe disposal options available.

Table 2-3: DEF Material Collection Programs

Program	Waste diversion benefits	Additional infrastructure required	Permitting considerations	DEF Disposal Costs	Participants' Direct Cost
<b>Residential Food Scrap Transportation and Disposal (RFSTAD)</b>	~1,100 tons of food scraps annually	None	None	\$250 per ton	Cost neutral compared to MSW (\$34.14 fee per ton)
<b>Medication Take-Back</b>	~4 tons of medications collected at the H-MRF annually.	None	None	\$450/month	None
<b>Mobile Shredder</b>	~240 tons of paper annually	None beyond truck maintenance and replacing truck when needed	None	~\$505/event	None
<b>Boat Wrap Recycling</b>	~50 tons of plastic annually	None	None		None
<b>Electronic Waste Recycling</b>	~700 tons of e-waste annually	None beyond replacing damaged containers	None		None
<b>Textile Recycling</b>	~16 tons textiles annually	None	None		None
<b>Household Recycling Days</b>	~135 tons of HHW, e-waste, and textiles annually	None	Complete annual report	~\$230,000 annually (for 5 events)	None
<b>Lithium Ion Battery Collection</b>	~1 ton of batteries annually	None	None	~\$5,000 annually	None
<b>Organic Yard Waste Transfer Station IMA Program</b>	~95,000 tons of yard waste annually	None	None	\$69 per ton	Cost savings compared to MSW (\$20.89 fee per ton)

## 2.3. Education and Outreach

### 2.3.1. Recycling HelpLine

DEF's Recycling HelpLine serves as a free informational tool to provide local residents and businesses with answers to questions regarding waste management and recycling. Residents can also call the HelpLine to book an appointment to deliver material to the H-MRF. The HelpLine is available 7 days a week from 9 a.m. to 7 p.m. and is operated by staff from the United Way, trained to answer frequently asked recycling questions, and to transfer other more detailed or technical questions to appropriate DEF staff. Additionally, the HelpLine assists residents with questions related specifically to their particular locale, since waste collection programs can vary from one municipality to another. In 2024, the Recycling HelpLine handled 17,717 inquiries.

### 2.3.2. Recycling Education

The MRF Education and Conference Center allows visitors to observe the operation of a municipal solid waste and recyclables transfer station. In total, 54 tours were given in 2024 for 384 adults and 1,035 students. MRF tours are free of charge and offer participants the opportunity to learn about the management of solid waste and recyclables in Westchester. Tours allow participants to see the equipment that separates, sorts, and prepares materials for sale to third-party recyclers. From an observation tower, visitors can see the tipping floor, where truckloads of recyclables are delivered.

Continued recycling education occurs daily as DEF staff regularly answer questions from the public via email, phone calls, and social media. These interactions provide an opportunity to share educational resources with County residents. Staff attending Household Recycling Days also pass out educational recycling flyers, including the Recycle Right pamphlets and information about the H-MRF in Valhalla.

In addition, the Recycling Office:

- Prepares recycling palm cards and other publications that are distributed to residents at County events, and to businesses and institutions during inspections, as well as posted on the department website and social media;
- Produces recycling instructional videos that are posted on the website and social media;
- Conducts regular meetings with local Municipal Recycling Officials (MROs) to update them on new and ongoing recycling and waste reduction initiatives;
- Attends County and municipal events throughout the year to inform residents on new and ongoing recycling and waste reduction initiatives; and
- Assists municipalities with collection staff education and local educational material review.

**2.3.3. Recycling Enforcement**

DEF inspectors inspect loads tipped at both private and municipal transfer stations located within Westchester, looking for improperly mixed loads of garbage and recyclables in violation of the Source Separation Law (SSL). They also inspect businesses, schools, multi-tenant buildings, and other institutions throughout the County to ensure compliance with the SSL. Inspectors also participate in outreach efforts to educate businesses about the new Single-Use Plastics legislation that went into effect in September 2023 and recent amendments to the County's Source Separation Law. In 2024, DEF issued 107 Notices of Hearing to haulers and waste generators for recycling violations. Of the violations issued, 25 were issued to municipal haulers, 54 were issued to private haulers, and 28 were issued to waste generators.

**2.3.4. Recycle Coach App**

DEF partnered with Recycle Coach to launch a free mobile app to help make recycling and solid waste information more accessible to County residents. Recycle Coach connects residents with their municipal collection schedules, shares local disposal and recycling information and supplies educational tools to help make it easier to recycle products. The App has image recognition that allows users to easily determine how to properly dispose of the item, or to inform purchasing decisions. DEF staff ensure data is up-to-date and relevant. Users can access Recycle Coach from their desktop computers and mobile devices. In 2024, 18 municipalities joined the program increasing overall program participation to 25 municipalities.

**2.3.5. Compost Education**

The CompostED facility, located on the Grasslands Campus in Valhalla, is the District's food scrap composting demonstration and education site. CompostED hosts interactive tours that engage participants with the compost process, which focus on the science behind composting and emphasizes the benefits and uses of compost. The site has the capacity to process up to two tons of food scraps a week. In 2024, CompostED hosted 10 tours for 197 participants. The facility also composted 56 tons of food waste, 120 cubic yards of leaves and 300 cubic yards of brush. CompostED distributed 103 cubic yards of compost to various community gardens, parks, and farms across the County.

With the help of the CompostED program and staff, White Plains recently launched an on-site composting facility at the Gedney Recycling Yard. This facility represents a significant step forward in municipal composting, utilizing an Aerated Static Pile (ASP) System to process food scraps. The site eliminates the need to transport organic waste to off-site processors, thereby reducing the emissions that are associated with transportation.

### 3.0 PUBLIC ENGAGEMENT AND OUTREACH

To foster active public involvement and gather comprehensive feedback, this study integrated both digital engagement methods and in-person interaction with interested stakeholders and the general public.

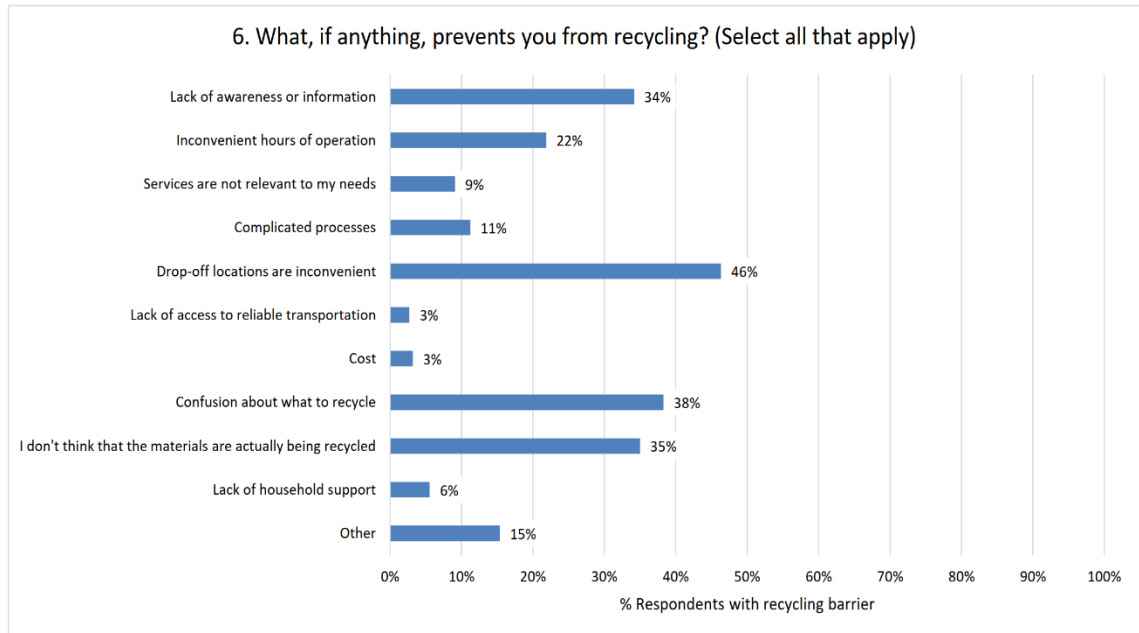
Three (3) distinct online surveys were developed to reach different audiences, including County residents, commercial businesses, and municipal officials. Each survey was designed to collect detailed insights on specific areas of concern and interest. The surveys were distributed by email campaigns, press releases, social media posts, and dedicated outreach through organizational channels. The residential survey remained open for approximately three (3) months, and the commercial and municipal surveys remained open for one (1) month. The raw survey results are included in Appendix B. A total of **1,302** completed responses were received between the three (3) surveys. They yielded the following common themes and key findings:

Overall, the survey responses revealed that the most common challenges and barriers to implementing waste reduction and circular economy initiatives are **insufficient public awareness and engagement**, **lack of funding or budget constraints**, and **limited infrastructure or resources**. Additionally, some municipalities cited **resistance to change from residents or businesses** and a lack of **technical expertise or adequate staffing** as significant hurdles. These challenges emphasize the need for targeted education, funding support, and improved infrastructure to enable successful adoption of sustainable practices moving forward.

The **residential survey** received a total of 1,219 completed responses.

- The residential survey results reveal that while Westchester County residents generally support and value waste reduction and recycling initiatives, they encounter several barriers, as follows:
  1. **Inconvenient Drop-Off Locations (46% of respondents):** Respondents reported that limited accessibility to recycling centers or drop-off sites, like the one in Valhalla, deters participation, especially for specialized recycling like hazardous waste or textile recycling. (However, some of these responses may be attributable to a lack of awareness of available resources rather than an insufficient number of drop-off locations. [See paragraph 4 below.] Virtually all of the municipalities within Westchester offer drop-off options for curbside recyclables, while most offer other drop-off options as well, including E-waste, textiles, bulk metals, food scraps, and many others. In addition, the County often conducts Household Recycling Day events at which residents can deliver all of the items accepted at the H-MRF.)
  2. **Confusion About Recycling Guidelines (38% of respondents):** Many residents are unclear about what materials can be recycled, leading to hesitation or mistakes. For instance, items like pizza boxes, wax-coated cartons, and certain plastics are often mishandled because the rules are either complex or poorly understood.
  3. **Skepticism About Recycling Effectiveness (35% of respondents):** A notable portion of respondents believe that recycled materials are not effectively processed or reused, creating a sense of futility in their efforts.

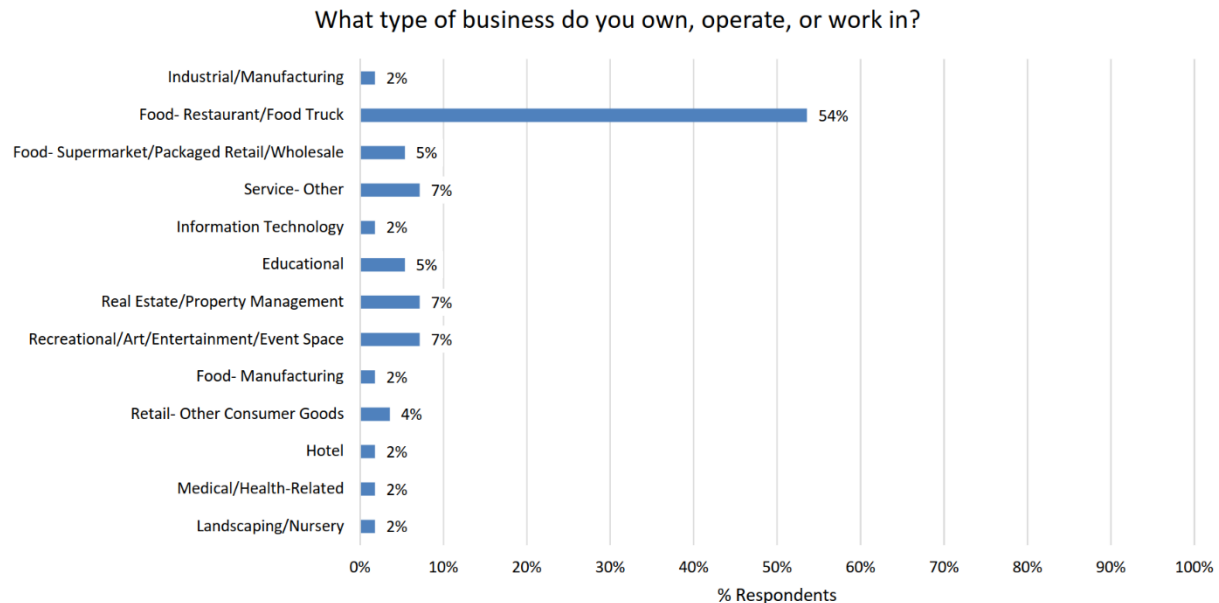
4. **Lack of Awareness or Information (34% of respondents):** Residents often remain uninformed about available programs like food scrap recycling or specialized services such as lithium-ion battery collection.
5. **Inconvenient Hours of Operation (22% of respondents):** Residents struggle to access services during working hours, and appointment systems, such as at the Valhalla facility, can be restrictive.
6. **Transportation Limitations (3% of respondents):** For those without reliable transportation, reaching recycling or waste reduction facilities is challenging.



- High awareness exists for curbside recycling and yard waste collection, but less so for specialized programs like lithium battery collection or textile recycling.
- Many respondents highlighted the need for increased education about available services, as a significant portion were unaware of specific options or confused about what can be recycled.
- Convenience emerged as a recurring theme, with calls for more curbside collections, local drop-off centers, and broader accessibility for services like food scraps and hazardous waste recycling.
- Additionally, respondents expressed skepticism about whether materials are truly recycled, further emphasizing the importance of education.
- There is strong interest in expanding programs like composting, repair workshops, and reuse initiatives to support sustainability and reduce reliance on waste-to-energy facilities.

Overall, the residential findings underline a desire for enhanced communication, accessibility, and community-driven solutions to improve participation and environmental outcomes.

The **commercial survey** received a total of 56 completed responses.



- The survey results highlight that Westchester County businesses show interest in circular economy practices but face the following notable challenges in implementation:
  1. **Lack of knowledge/resources/support (49% of respondents):** Businesses emphasized a need for greater awareness, accessible information, and practical tools to guide implementation. For instance, responses noted a lack of services for compost collection and/or reusable takeout container programs.
  2. **High Initial Investment Costs (22% of respondents):** Many businesses find upfront costs for adopting sustainable practices prohibitively high, limiting their ability to transition to circular economy models.
  3. **Limited Supply Chain Options (13% of respondents):** Challenges arise from insufficient availability of sustainable suppliers or infrastructure to support practices like recycling, upcycling, or sustainable packaging.
  4. **Consumer Awareness/Acceptance (13% of respondents):** Businesses encounter resistance or lack of understanding among their customers, which hampers efforts to incorporate circularity into their operations.
  5. **Other Challenges (4% of respondents):** Some respondents expressed a need for tailored solutions, such as specific composting services for commercial properties, which further highlights gaps in infrastructure and accessibility.
- Packaging emerged as the area with the highest potential for waste reduction.
- Monetary incentives were identified as the strongest motivator for adopting sustainable measures.

- Many businesses expressed willingness to embrace sustainable packaging and food scraps recycling programs if costs were competitive and resources were accessible (66% of respondents).
- A significant barrier to circular economy adoption is the lack of knowledge, resources, and support, with many respondents requesting training, case studies, and technical consulting.
- Respondents also emphasized the need for public-private partnerships and government support for research, mandatory standards, and service provisions like compost collection.

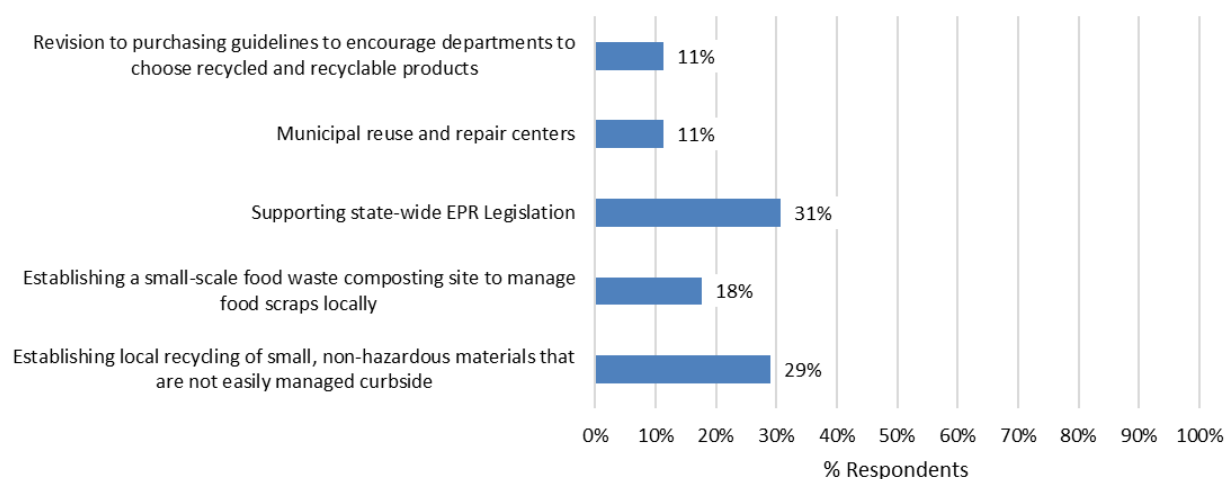
Overall, the commercial findings reveal a desire for greater collaboration, education, and systemic support to drive waste reduction and sustainability efforts forward. The challenges noted by the businesses underscore the importance of targeted interventions, such as public-private partnerships, and government support, to overcome these barriers effectively.

The **municipal survey** received a total of 27 completed responses.

- The municipal survey results emphasize a strong interest in waste reduction and circular economy efforts, though challenges remain significant. Specific examples of challenges municipalities face, according to the survey, include:
  1. **Lack of Funding or Budget Constraints (21% of respondents):** This is a significant hurdle, as limited financial resources prevent municipalities from investing in necessary infrastructure, personnel, and initiatives. For instance, municipalities noted challenges in funding collection programs for specialized items like refrigerants and fluorescent light bulbs.
  2. **Limited Infrastructure or Resources (21% of respondents):** Insufficient facilities or technology to handle waste reduction and recycling efforts hinders progress. For example, the absence of local facilities to support small-scale composting or specialized recycling efforts was mentioned.
  3. **Insufficient Community Awareness or Engagement (18% of respondents):** Municipalities highlighted the need for stronger educational campaigns to increase community involvement, and noted that efforts to introduce new initiatives often face pushback due to skepticism, inconvenience, or hesitation to alter established habits.
  4. **Inadequate Staff or Expertise (10% of respondents):** Many municipalities struggle with a lack of specialized personnel or training to effectively design and implement programs, limiting their operational capacity.
  5. **Difficulty Measuring Program Effectiveness (10% of respondents):** Municipalities face challenges in assessing the impact of their initiatives, making it harder to justify continued investments or identify areas for improvement.
- A majority of municipalities see reducing waste and transitioning to a circular economy as very important. Common barriers include insufficient public awareness, funding constraints, and limited infrastructure.
- Expanding curbside recycling, establishing composting facilities, and addressing construction and demolition debris are seen as impactful measures.
- Local municipalities are particularly keen on County-led education, technical assistance, and partnerships to promote awareness and engagement.

- Funding opportunities and policy guidelines are identified as the most critical resources to overcome challenges.
- There is a willingness to invest financially if initiatives lead to long-term environmental and economic benefits, although uncertainty persists.

5. Choose three circular economy activities you believe could be successfully implemented in your municipality. (Select up to three)



Overall, municipalities are advocating for accessible resources, clear guidelines, and collaborative efforts to effectively implement sustainable practices. The municipal findings highlight a desire for increased funding opportunities, streamlined policies, technical support, and stronger community engagement.

In addition to the online surveys, this waste reduction study also offered opportunities for in-person public participation via two (2) public input sessions that were hosted at the Westchester County Center, in White Plains, which was selected due to its central location within the County, and its proximity to public transportation. These sessions were held on February 26, 2025, and March 12, 2025. They were offered at different times, 3:00 p.m. to 5:00 p.m. and 7:30 p.m. to 9:00 p.m., respectively, to increase accessibility. The February 26<sup>th</sup> session had approximately 15 attendees with almost all of them voicing their thoughts; the March 12<sup>th</sup> session had 4 attendees, and all of them spoke during the session. DEF employees presented concise explanations of existing programs, as well as a summary of the waste reduction study goals and background. A public comment opportunity followed each presentation, allowing direct interaction, clarification of concerns, and the collection of qualitative feedback. The discussions were guided by specific prompt questions covering the topics of food waste diversion, serving under-represented communities, and product stewardship and extended producer responsibility.

Residents who were not able to attend the in-person sessions were invited to submit open-ended comments through the DEF website to discuss their current waste concerns and what they would like to see in the future regarding waste reduction in their towns. In total, 145 people submitted comments representing 29 different towns located across Westchester County. Comments that were received from towns not located in Westchester County represented less than 5% of the overall responses.

Of the total comments received, the most feedback came in from the following towns:

- Peekskill (23%)
- Hastings on Hudson (16%)
- Croton on Hudson (8%)
- Irvington (7%)
- White Plains (6%)

Upon giving their responses, 60 residents, (41% of the total), used a “form letter” approach. The form letter was initiated by a local environmental group, and stated that the resident wanted the DEF to move Westchester toward Zero Waste goals, and to promote the closure of the WIN-Waste waste-to-energy (WTE) facility, the latter of which is not in the scope of this Waste Reduction Study as it is a privately operated facility.

Other comments received at the in-person presentations and in the online follow-up were very similar to what was observed in the survey responses. The following top themes and key findings emerged from the public input:

- **Theme 1: Organics Management**

Organic waste was a specific facilitated topic in the stakeholder meetings, as well in the online survey that was distributed to the general public, to commercial businesses, and to municipalities. The specific discussion question centered on organics was:

- Prompt Question – Food Waste Diversion – How can we better address food waste in our community, and what role should local governments, businesses, and residents play in food waste diversion efforts? Sub questions that followed this initial question included:
  - How can we expand or improve our current food waste recovery programs?
  - What can the County do to encourage partnerships between local restaurants, grocery stores, and farmers to minimize food waste?
  - What are the barriers preventing individuals or businesses from reducing food waste?

**Key Findings:**

- 67% of respondents were aware of food scraps collection programs.
- 61% of respondents reported using food scraps collection services at least once per year.
- 34% reported never using food scraps collection, often citing lack of access or inconvenient drop-off locations.

**Common Requests:**

- Expansion of curbside food scrap collection.
- More drop-off sites and extended hours.
- Composting of school cafeteria waste.

- Creation of a County composting facility.

Representative Comments:

- “I would love to have food scrap curbside pick up and local textile recycling drop off.”
- “Food composting attracts mice to my home and the drop-point is 5 miles away.”
- “I currently pay for food scrap collection... would prefer this come through municipal services.”

Many residents expressed desire for a food scrap composting curbside collection program. Commenters suggested opening a composting facility and increasing disposal fees at the WTE facility to encourage composting of organic waste instead of disposal. (It is important to note that the WIN-Waste WTE facility is a privately operated facility and DEF does not control the tip fees.) Responses also indicated a desire to compost school cafeteria waste.

Additionally, the online survey included multiple questions related to organic waste, specifically regarding food scraps recycling and composting. Residents were asked to rate their experience with food scraps recycling and many of their comments highlighted food scraps collection as a valuable service, while others expressed frustration with limited access or inconvenient drop-off locations, which are determined by the local municipalities.

Residents were asked what additional waste diversion or sustainability programs they would like to see, and many responses were applicable to organic waste, including: more food scraps recycling programs in schools, expansion of municipal composting programs, curbside collection of food scraps, and more drop-off sites for food waste.

- **Theme 2: Recycling Education**

Education about recycling and waste reduction was a prevalent topic among commenters. Many simply stated that Westchester needs to reduce waste, generally, noting that waste reduction education is needed to help understand how to reduce waste, and especially, the need for resources identifying what can and cannot be recycled or composted.

Key Findings:

- Only 11% of respondents were aware of the Recycle Coach app.
- 87% reported never using it.
- 9% were aware of the County’s Recycling Helpline.

Common Requests:

- Clearer guidance on what can and cannot be recycled.
- More localized education tools (e.g., Recycle Coach plugins).
- Better promotion of existing services.

**Representative Comments:**

- “I think more can be done to help consumers know what can be recycled.”
- “I didn’t know there was textile recycling.”
- “Could the County disseminate info via the towns?”

**• Theme 3: Serving Under-Represented Communities**

Serving under-represented communities in waste reduction strategies moving forward was a specific facilitated topic in the stakeholder meetings and survey. In particular:

- Prompt Question – Serving Under-Represented Communities – How can the waste diversion efforts better serve underrepresented or marginalized populations, including low-income, immigrant, and elderly groups? Additional sub questions that further guided this discussion included:
  - What barriers exist to access or participation in current waste diversion programs for these groups?
  - How can education and outreach be more effective for these populations?
  - Are there specific strategies to ensure that these communities benefit from waste diversion initiatives such as tailored programs or incentives?

**Key Findings:**

- Open-ended responses frequently cited transportation barriers, limited drop-off locations, and lack of awareness.
- Apartment dwellers, seniors, and non-English speakers were identified as underserved groups.

**Common Requests:**

- Curbside collection for food scraps and e-waste.
- More HHW drop-off centers.
- Integration of reuse and repair programs.
- Tailored outreach for renters and immigrant communities.

**Representative Comments:**

- “I live in a high-rise apartment. I wish there was a place for curbside pickup.”
- “Valhalla is far from our house. We need services for textile recycling in Pound Ridge.”
- “I only have the option for curbside recycling and did not know of the others.”

The online survey also inquired about accessibility for underrepresented groups, and respondents pointed out that lack of access to transportation, inconvenient drop-off locations, and cost concerns could disproportionately affect underrepresented groups, such as low-income residents, seniors, or those with mobility challenges. Several open-ended responses indicated that recycling education could be improved for renters, non-English speakers, and apartment dwellers. Further, when residents were asked about new programs they would like to see, some

responses highlighted accessibility needs such as curbside collection of food scraps or e-waste, more HHW drop-off centers, and integration of reuse and repair programs.

- **Theme 4: Textiles**

Multiple respondents expressed a need to ensure that textiles could be recycled. As textile recycling is already offered and occurring in Westchester County, including through an optional curbside program, this feedback speaks to the need for expanded recycling education, as described above.

Key Findings:

- 35% of respondents were aware of textile recycling.
- Only 24% reported using it more than once per year.

Common Requests:

- More textile recycling locations.
- Better publicity and signage.
- Integration with farmers markets and municipal centers.

Representative Comments:

- “Not enough textile recycling options! How can I responsibly dispose of couch cushions?”
- “Textile recycling bins in Mamaroneck rarely seem to get emptied.”

- **Theme 5: Extended Producer Responsibility (EPR)**

Westchester County recognizes EPR as a key component of waste reduction, as demonstrated by including it as the final prompt discussion question in the stakeholder meetings as follows:

- Prompt Question – Product Stewardship and Extended Producer Responsibility – What other steps could the County take to encourage residents/consumers to participate in these programs? The sub questions to guide this discussion included:
  - If there was an upfront fee on a product that ensured it would be properly recycled once disposed, would you be willing to pay it?
  - How can the County encourage and motivate residents to return or properly dispose of products at the end of their life?
  - In the past years, EPR laws have been proposed for paint, mattresses, batteries, and packaging products. Are there other items that you would like to see included in EPR policies moving forward?

Key Findings:

- Stakeholder meetings revealed strong support for EPR policies.
- Residents expressed willingness to pay upfront fees for responsible disposal.

Common Requests:

- EPR expansion for paint, mattresses, batteries, packaging.
- Stronger enforcement and incentives.
- More drop-off options for EPR-covered items.

Representative Comments:

- “I believe recycling is good for the planet and supports the efforts.”
- “We have appreciated the opportunities to get rid of unwanted and/or dangerous items without putting them in the trash.”

The stakeholder and public input received on this topic was consistent with the County’s desire to further spur EPR policies within the District and statewide.

The feedback noted in each of these themes is taken into account in this study’s recommendations.

Additionally, a virtual stakeholder meeting was held with representatives from the three following specific local environmental groups: Federated Conservationists of Westchester County, Sustainable Westchester, and the Westchester Alliance for Sustainable Solutions (WASS), which included the same presentation as the in-person public input sessions and discussion prompts covering food waste reduction, better serving underrepresented communities, and product stewardship. During the virtual stakeholder meeting, the discussion of one group centered primarily on the desire to close the WTE facility, which is outside of DEF’s control, as it is a privately operated facility. Other common requests included providing more incentives, stronger enforcement, expanding RFSTAD to include curbside collection in more municipalities, more outreach to inform residents of DEF’s programs, take-it-or-leave-it programs, and packaging reduction.

This blended outreach approach enabled the engagement of a broad demographic, combining structured data from surveys and dynamic community input from live sessions, revealed strong public interest in expanding organics diversion, improving recycling education, and ensuring equitable access to waste reduction services. These themes directly inform the recommendations outlined in this study.

#### 4.0 RECOMMENDED STRATEGIES FOR WASTE REDUCTION AND DIVERSION

Ten (10) specific strategies have been established in this study to guide the County's waste reduction efforts moving forward. These strategies aim to reduce waste, increase recycling rates and public participation, and ultimately lead to a more sustainable waste management system that is beneficial to the community and the environment. The following recommended strategies build upon the existing waste reduction programs already in place in Westchester County and were ultimately informed by robust and diverse public input, as well as supplemental expertise in zero waste planning provided by B&L.

The framework guiding the recommended strategies is based on considerations of:

- How to prevent waste, reduce waste, and/or reuse materials?
- What to divert/recycle?
- How to collect and process materials?
- How to finance programs?




































The following table lists each recommended waste reduction strategy, along with specific details provided in the accompanying narrative.
















Strategy #:	Recommendation:
1	Expand Organics Management (Both Food & Yard Waste Materials)
2	Get Back to Basics – Recycling Education Campaign
3	Increase Multi-Family Building Outreach
4	Support Municipal and Commercial C&D Diversion
5	Maximize Diversion from the Commercial Waste Stream
6	Maximize the Benefits of Enforcement
7	Support State-wide Extended Producer Responsibility
8	Expand and Enhance Green Purchasing Opportunities
9	Emerging Material Recovery Facility Technologies
10	Promote Reuse and Repair Cafes

The following table summarizes the recommended waste reduction strategies, each evaluated for its implementation timeframe, capital or upfront costs, ongoing operational expenses, waste diversion potential, and estimated GHG emission reduction potential. Together, these strategies represent a comprehensive approach to reducing waste generation, increasing material recovery, and minimizing environmental impacts. The table is intended to provide a comparative overview to help prioritize actions based on feasibility, cost-effectiveness, and sustainability benefits. Detailed descriptions and supporting analyses for each of the 10 strategies are provided following the table. When implemented,

these combined waste diversion strategies will provide a multifaceted approach to advancing waste reduction goals. Each strategy, as described below, is designed to address existing challenges while leveraging partnerships and resources to achieve maximum impact, as well as accommodate public input and feedback. The summary table provides a high-level overview of anticipated resource needs and potential waste reduction outcomes, supporting strategic prioritization and phased implementation planning.

Table 4-1: Strategies Resource Needs and Expected Outcomes Summary

Recommended Strategy	Timeframe	Estimated Expenses		Estimated Staffing Needs	Estimated Environmental Impact	
		Capital or Upfront Cost	Ongoing Operational Cost (annual)		Waste Diversion Potential	GHG Emissions Reduction
1. <b>Expand Organics Management (Both Food &amp; Yard Waste Materials)</b>	 Mid-Term 2030-2035	 \$250,001 - \$1M (non-infrastructure); >\$20M infrastructure	 >\$500,000	Additional Staff Needed	 0 - 50,000 tons diverted	 1 - 100,000 MTCO <sub>2</sub> e
2. <b>Get Back to the Basics - Recycling Education Campaign</b>	 Short-Term 2025-2030	 \$0 - \$250,000	 \$0-\$100,000	Existing Staff	 50,000 - 100,000 tons diverted	 125,000 - 250,000 MTCO <sub>2</sub> e
3. <b>Increase Multi-Family Building Outreach</b>	 Short-Term 2025-2030	 \$0 - \$250,000	 \$100,000 - \$200,000	Existing Staff	 50,000 - 100,000 tons diverted	 125,000 - 250,000 MTCO <sub>2</sub> e
4. <b>Support Municipal and Commercial C&amp;D Diversion</b>	 Mid-Term 2030-2035	 \$250,001-\$1M	 \$100,000 - \$200,000	Additional Staff Needed or reallocation of existing staff	 100,000 - 150,000 tons diverted	 1 - 100,000 MTCO <sub>2</sub> e
5. <b>Maximize Diversion from the Commercial Waste Stream</b>	 Short-Term 2025-2030	 \$0 - \$250,000	 \$0-\$100,000	Existing Staff	 50,000 - 100,000 tons diverted	 75,000 - 200,000 MTCO <sub>2</sub> e
6. <b>Maximize the Benefits of Enforcement</b>	 Long-Term 2035-2050	 \$250,001-\$1M	 \$100,000 - \$200,000	Additional Staff Needed	 0 - 50,000 tons diverted	 1 - 100,000 MTCO <sub>2</sub> e
7. <b>Support State-wide Extended Producer Responsibility</b>	 Short-Term 2025-2030	 \$0 - \$250,000	 \$0-\$100,000	Existing Staff	 50,000 - 100,000 tons diverted	 75,000 - 200,000 MTCO <sub>2</sub> e

Recommended Strategy	Timeframe	Estimated Expenses		Estimated Staffing Needs	Estimated Environmental Impact	
		Capital or Upfront Cost	Ongoing Operational Cost (annual)		Waste Diversion Potential	GHG Emissions Reduction
8. Expand and Enhance Green Purchasing Opportunities	 Mid-Term 2030-2035	 \$0 - \$250,000	 \$100,000 - \$200,000	Existing Staff	 50,000 - 100,000 tons diverted	 75,000 - 200,000 MTCO2e
9. Emerging Material Recovery Facility Technologies	 Short-Term 2025-2030	 \$250,001-\$1M	 \$100,000 - \$200,000	Existing Staff	 0 - 50,000 tons diverted	 1 - 100,000 MTCO2e
10. Promote Reuse and Repair Cafes	 Mid-Term 2030-2035	 \$0 - \$250,000	 \$100,000 - \$200,000	Additional Staff Needed or reallocation of existing staff	 0 - 50,000 tons diverted	 1 - 100,000 MTCO2e

**Expense and Impact Estimation Methodology**

To support realistic planning and resource allocation, cost and diversion estimates were developed using a range-based approach. This methodology accounts for variability in participation rates, seasonal fluctuations, and operational efficiency, offering flexibility and accommodating uncertainty. Presenting ranges rather than fixed figures enables more accurate performance tracking over time and fosters transparent communication with funders and the public by setting expectations grounded in current conditions.

Expense projections reflect a blend of industry expertise and benchmarking against comparable programs in peer U.S. communities. Implementation timeframes were sequenced to support logical, phased rollout aligned with County priorities. Waste diversion and greenhouse gas (GHG) reduction potentials were calculated using Westchester County’s baseline municipal solid waste (MSW) disposal total, in conjunction with the U.S. Environmental Protection Agency’s Waste Reduction Model and Greenhouse Gas Equivalencies Calculator.

These estimates represent the full scope of implementation, including design, construction, and operation of necessary infrastructure. As such, some strategies carry higher projected resource requirements due to their comprehensive nature. However, partial implementation remains a viable and impactful alternative.

The values shown are rounded and based on planning-level assumptions, so actual outcomes will depend on facility operations and participation rates. Because several strategies address the same MSW tonnage through different mechanisms, their impacts overlap. As a result, reduction estimates should not be added together. These estimates are best interpreted as indicative potential reductions rather than cumulative totals.

#### 4.1. Strategy 1: Expand Organics Management (Both Food & Yard Waste Materials)

According to the 2021 Westchester County MSW and Recyclables Waste Characterization Report<sup>23</sup> completed by Stony Brook University, food scraps alone account for an estimated 23% of the MSW stream in New York State. When combined with yard waste, these organic materials represent approximately 27% of the total waste stream and thus, enhancing the management of both food and yard waste is crucial to increasing overall waste diversion. Emphasis on organic waste, both food scraps and yard waste materials, is already a priority focus of DEF, as demonstrated by its focus in the public education and outreach previously described in Sections 2 and 3 of this report.

This strategy focuses on reducing waste by optimizing organic waste diversion, primarily through education and regional partnerships. First, opportunities for large-scale food scrap collection may be evaluated via a thorough review of the municipal programs identified in previous studies. Particular focus may be on the municipalities that have successful organics collection programs within the District already, including the Village of Scarsdale, City of Yonkers, and the City of White Plains, which, with the assistance of DEF's RFSTAD and CompostED programs have implemented successful food scrap composting initiatives that serve as effective models for organics recycling.

Ensuring processing capacity is a crucial component of an enhanced organics strategy, and the White Plains facility, in conjunction with the CompostED program, serves as a great example to encourage other communities within the District to develop similar facilities. It is recommended that DEF complete the feasibility study to assess the potential for establishing its own larger-scale organics facility, in addition to continuing to support and encourage local small-scale organics facilities. Determining capacity needs will ultimately support the County's waste reduction objectives, and could be used in developing a larger-scale District facility, or as the basis of an RFP to attract private food scrap recyclers to operate within the County. DEF should also continue to encourage additional district municipalities to participate in RFSTAD, which would increase demand for local food scrap recycling, and develop local small-scale composting sites to promote local management of this resource.

Enhanced yard waste management through grass-cycling and leaf mulching may be actively promoted as simple yet impactful practices to reduce the disposal of organic yard waste materials. Partnerships and collaboration with organizations such as Cornell Cooperative Extension Westchester County could be used to bolster residential backyard composting education efforts.

To address food waste more comprehensively, this strategy recommends strengthening partnerships with organizations involved in food recovery and redistribution. While Feeding Westchester plays a central role in regional food donation efforts, past outreach has indicated that they may not accept certain perishable items. Therefore, collaboration should be

---

<sup>23</sup> Key findings of this report are included in Section 5.15.1.

broadened to include other active partners such as Meals on Main, Hope Community Services, and CompostED, which currently collects surplus food from these organizations and helps close the loop by returning compost to community gardens that supply fresh produce back to them.

This circular model — where food scraps are composted and the resulting compost is used to grow food for donation — exemplifies a community-based approach to food waste reduction. Supporting and expanding these types of initiatives can help reduce disposal, improve food access, and build local resilience.

Additionally, the County can further promote food pantry information through several resources, including Feeding Westchester's food pantry locator, FoodPantries.org, which maintains a directory of food pantries in Westchester County, and the Westchester County Department of Social Services. These tools, which are publicly available directories and not a centralized County-run database, are often linked by municipalities or nonprofits to encourage food donation and access for residents and businesses that are seeking donation outlets, and/or to streamline donation logistics for perishable and prepared foods where feasible.

As education is a key component of this strategy, incorporating school-based programs with specific goals, such as cafeteria composting, garden-based learning, and food waste awareness, can foster sustainable habits among students and encourage broader community participation.

As part of this study, a school composting survey was developed and distributed to districts across the County. Representatives from 18 districts participated (see Appendix C for full list and summary), with over 55% indicating active engagement in food recovery and/or composting initiatives. Many respondents expressed strong interest in advancing food waste diversion, through activities such as launching pilot programs, adopting compostable cafeteria trays, or transitioning to washable alternatives. This widespread enthusiasm, coupled with a demonstrated openness to collaboration and peer learning, suggests a promising foundation for future partnership with the County. Accordingly, these 18 districts are recommended as priority partners for initial implementation.

In summary, to expand organics management in the District, it is recommended that DEF take the following actions:

- Perform an organics infrastructure capacity needs assessment;
- Encourage additional municipalities in the district to participate in RFSTAD;
- Provide expertise and support development of local composting yards, replicating the success of the DEF/White Plains collaboration;
- Develop an educational campaign for residents related to backyard composting, grasscycling, and leaf mulching;
- Investigate the feasibility of siting, constructing, and operating a larger-scale County composting facility and/or partner with a private entity to design and operate a centralized composting facility; and
- Explore the development of a food scraps collection program at schools. Start with pilot programs in schools that have expressed support for composting, and integrate

education and student engagement to build awareness and reduce contamination. However, it must be noted that there are certain legal impediments that potentially prevent the District from subsidizing such school programs.

Collectively, these actions represent a cohesive framework to reduce organic waste, engage stakeholders, and progress toward Westchester County's waste reduction targets. This strategy includes expanding food scraps and yard waste collection, increasing drop-off access, integrating school and institutional programs, and exploring regional composting infrastructure.

#### **4.2. Strategy 2: Get Back to Basics – Recycling Education Campaign**

Public feedback has revealed a considerable gap in residents' awareness of the DEF's current recycling programs and resources, highlighting the need for a targeted "Back to Basics" education campaign. This strategy aims to bridge knowledge gaps, improve recycling participation, and reduce contamination through a multifaceted approach.

The key components of this strategy include the development of educational videos showcasing the journey of recycled materials, and emphasizing the role of the local facilities, including the H-MRF, Waste-to-Energy plant, and Transfer Stations. These visual narratives could offer residents a clearer understanding of recycling processes and their impact on waste management. To complement the videos, outreach materials such as flyers, magnets, and multilingual resources could be distributed to ensure inclusivity and accessibility for diverse audiences. A robust social media campaign can serve as a dynamic platform for sharing new videos, as well as additional tips, program updates, and announcements, fostering ongoing engagement with the community.

To address the specific knowledge gaps identified in the public surveys, the campaign could promote targeted initiatives, such as textile recycling, Rx Takeback programs, and the DEF Helpline, encouraging residents to utilize these resources more effectively. To enhance impact, it is recommended that DEF collaborate with the Westchester County Communications Department to leverage expertise to craft compelling outreach materials that resonate with audiences.

One proven tactic is the "Feet on the Street" model, developed by The Recycling Partnership, which focuses on improving curbside recycling quality and reducing contamination through hands-on cart-tagging and direct resident feedback. Westchester County has already implemented a version of this approach through its "Oops Sticker" program, which provides visual cues and corrective messaging when contaminants are found in recycling bins. Neighboring counties such as Rockland County and Dutchess County have piloted similar cart-tagging initiatives, demonstrating measurable improvements in recycling quality and resident awareness. These examples offer valuable models for scaling Westchester's own efforts and aligning with best practices across the region.

Building upon the already strong public education program that DEF conducts on an ongoing basis requires refining and expanding the outreach in meaningful ways to enhance its impact

and engagement. The “Back to Basics” campaign can elevate the DEF’s current efforts through tailored content that focuses specifically on addressing gaps identified through public feedback.

For example, the survey responses acknowledged a general lack of awareness about specific material programs, such as textile recycling. Targeted messaging can help ensure that these gaps are explicitly addressed. In addition, multilingual and inclusive materials, i.e., content developed in multiple languages and tailored to underserved communities, would expand engagement, reaching segments of the population that may not have been effectively served by the current efforts.

The visual storytelling in the educational videos can make the process more tangible and relatable, thereby strengthening residents’ understanding and connection to the program. Integrating traditional outreach methods, such as flyers, magnets, and in-person events, with social media provides a multidimensional approach, ensuring that the campaign connects with residents in varied and complementary ways.

Flyers and other printed media should also be made available to the District Municipalities with local, specific information such as RFSTAD drop-off locations, and municipal logos and contacts. DEF has attempted to provide these materials in the past and should revisit this strategy to disseminate accurate information, and provide consistent branding and outreach for its programs.

Additionally, the education campaign should include outreach to municipal officials and the public outlining the cost savings realized by recycling within the District. Since District members pay no fee for recycling, increasing recycling (as long as the material continues to maintain a low contamination rate) saves municipalities and taxpayers money.

In summary, it is recommended that the following actions be taken:

- Launch a multilingual public information campaign on existing programs;
- Host community workshops/webinars with identified partners;
- Develop a “Feet on the Street” program;
- Provide documentation with District Municipality specific information and logos; and
- Promote cost savings for District Taxpayers when recycling rates are increased and recycling is done correctly.

#### **4.3. Strategy 3: Increase Multi-Family Building Outreach**

A recommended priority focus for DEF includes ensuring that multi-family units and complexes are complying with the Source Separation Law and are recycling.. This strategy recognizes that meaningful participation requires not only tailored outreach and inclusive engagement, but also the physical infrastructure to support recycling and composting.

Public input and stakeholder discussions highlighted barriers such as a lack of transportation, limited drop-off options, and language access. However, a critical operational barrier is the

absence of recycling and compost bins in some multi-unit buildings, which prevents residents from participating even when they are willing and informed.

To address this, DEF is developing an outreach initiative targeting building owners, property managers, housing authorities, and Realtors to assess infrastructure gaps and encourage collaboration with local municipalities. While DEF does not provide equipment directly, it can support adoption of standardized bin systems by offering:

- Technical assistance for bin placement and signage.
- Guidance on contamination reduction and tenant education.
- Coordination with municipalities to align service availability, infrastructure support, and enforcement mechanisms.

This infrastructure-focused outreach is currently in development and will be refined through pilot programs and stakeholder collaboration. It complements broader efforts to ensure that all residents, regardless of housing type, can fully participate in Westchester County's waste reduction goals.

A central component of this strategy involves developing toolkits for landlords, real estate agents, and municipalities. These toolkits could feature the Back to Basics campaign materials alongside detailed information about drop-off resources, with content offered in multiple languages to ensure accessibility across diverse populations. To welcome new residents, graphical guides on recycling best practices could be provided to those moving into the County.

To promote uniform and clear messaging, Recycle Right resources, including image/graphic-heavy downloadable signage for apartment buildings, schools, and offices, could be developed. These visuals will simplify recycling guidelines, making them easy to understand and implement. Building trust and fostering inclusivity will be integral to this strategy. Partnerships with local nonprofits and community-based agencies would leverage existing relationships to effectively reach underrepresented communities. Messaging should emphasize culturally diverse communication and collaborative dialogue. Input from members and leaders of the specific communities should be actively sought to ensure that materials and solutions are co-created with the communities they serve.

Workshops may be hosted to engage community members in brainstorming ideas and providing feedback. As suggested explicitly by the attendees of the environmental groups stakeholder meeting, collaborations with organizations such as the Black Chamber of Commerce and local churches will help drive attendance and amplify participation in these workshops. To encourage participation and reduce barriers, convenient meeting locations popular in the local community and accessible via public transportation should be used for any in-person outreach, with an aim to remove logistical obstacles and create welcoming spaces for community engagement. By focusing on tailored resources and active collaboration, this strategy seeks to empower multi-family housing residents, enhancing access to recycling programs and advancing the County's waste reduction goals.

In summary, it is recommended that the following actions be taken:

- Develop a multi-family dwelling-specific toolkit into relevant languages (i.e., Welcome Guide)
- Engage with specific non-profits, local business, real estate, and community groups (presentations, pop-up tables).

#### **4.4. Strategy 4: Support Municipal and Commercial C&D Diversion**

Construction and demolition (C&D) debris represents a significant portion of the waste stream, and targeted strategies can dramatically increase diversion rates. DEF should work with the Department of Planning to review the possibility of including a C&D recovery or recycling requirement in future RFPs and RFQs for County construction projects. Further, DEF should work with Planning to develop suggested language for C&D recovery or recycling that can be recommended for private construction projects that come before the Planning Board for review, and for local municipalities to incorporate into municipal projects.

In conjunction with the collection of County data, DEF could partner with local municipalities to track C&D waste volumes, resulting in data that could promote the private development of additional C&D recycling options.

Furthermore, deconstructed materials could be incorporated into public projects, such as sidewalks, parks, and municipal buildings, to create local market demand and facilitate a quick turnaround for the material.

A further step could involve the preparation and availability of a model ordinance for local municipalities to establish similar deconstruction or diversion programs.

#### **4.5. Strategy 5: Maximize Diversion from the Commercial Waste Stream**

Commercial recycling is a critical component of Westchester County's waste diversion strategy, as businesses generate a substantial portion of the municipal solid waste stream. Improving commercial recycling outcomes requires a combination of education, infrastructure support, and strategic enforcement. This strategy focuses on strengthening DEF's engagement with businesses to increase diversion, reduce contamination, and ensure compliance with the County's Source Separation Law (SSL).

Public feedback and DEF staff input have highlighted the need for more direct support to businesses, particularly small and medium-sized enterprises that may lack the resources or knowledge to implement effective recycling systems. To address this, DEF could expand its technical assistance offerings, and specifically its "friendly audit" program, where enforcement staff conduct supportive site visits to help businesses identify opportunities for improvement. These audits would focus on:

- Reviewing bin placement and signage
- Identifying contamination issues

- Clarifying SSL requirements
- Offering tailored recommendations for improvement

This approach reinforces compliance while building trust and promoting voluntary participation. Businesses would receive follow-up materials summarizing findings and suggested actions, along with access to DEF's outreach templates and signage resources.

Improving onsite recycling infrastructure is another key focus. Many businesses struggle with inconsistent messaging, poorly placed bins, or lack of clear signage, all of which contribute to contamination and low diversion rates. Under the SSL, businesses are required to separate recyclables from the trash, but compliance varies. DEF could strengthen support by:

- Updating and distributing standardized signage templates
- Providing multilingual and image-based materials for diverse workplaces
- Offering bin placement guidance and visual walkthroughs
- Coordinating with haulers to align service offerings with County goals

As an incentive to participation, DEF recognizes businesses at its annual Eco Awards, highlighting those that demonstrate leadership in waste reduction, reuse, and recycling. Recognition could further include public listings, branded logos, and case studies to foster peer learning and elevate success stories. A strong peer model for this approach is Tompkins County's ReBusiness Partnership Program, which offers voluntary waste assessments, tailored guidance on sustainable purchasing and contamination reduction, and public recognition for participating businesses. While DEF already provides many of these services, formalizing them into a branded initiative could increase visibility, participation, and impact.

#### **4.6. Strategy 6: Maximize the Benefits of Enforcement**

Effective enforcement plays a critical role in advancing waste reduction goals by ensuring compliance with regulations, discouraging improper disposal, and fostering a culture of responsible waste management through education. This strategy focuses on strengthening Westchester's existing enforcement mechanisms while integrating education and incentives to maximize impact. The key enforcement approaches included in this strategy are strengthening compliance monitoring, expanding inspection and reporting mechanisms, incentivizing compliance through positive reinforcement, and enhancing public education and outreach that clearly communicates regulatory requirements. These efforts are designed to support voluntary compliance and build public understanding, not to serve as punitive measures. Expanding enforcement ensures that recyclables are properly sorted to meet the County's regulations, as set forth in its Source Separation Law, and will also enhance the commercial recycling efforts described above. The enforcement focus refers to ensuring that education and outreach clearly communicate the requirements and consequences, while also promoting best practices through recognition and support.

Currently, DEF conducts routine inspections to ensure businesses and institutions adhere to recycling requirements. This strategy builds on those efforts by recommending more frequent and consistent audits of waste management practices across municipalities to assess compliance with County recycling and diversion mandates.

To achieve this, DEF could pursue a combination of approaches:

- Expand inspection capacity by adding staff.
- Partner with municipal sanitation departments or local code enforcement teams to support joint inspections.
- Use data-driven targeting, focusing on high-volume generators, repeat violators, or sectors with known contamination issues.
- Leverage technology, such as digital reporting tools or photo documentation, to streamline inspections and reduce administrative burden.

As a companion to these audits, DEF should continue enforcing penalties for non-compliance — including fines for excessive contamination or improper disposal of hazardous materials — while also offering technical assistance to help businesses improve.

This blended approach balances accountability with support, ensuring that enforcement drives measurable improvements in diversion without overextending County resources.

This strategy focuses on leveraging technology and outreach to improve monitoring and compliance. Smart waste tracking tools, such as RFID-tagged bins that enable automated tracking and data collection during waste collection, AI-powered contamination detection, and digital reporting dashboards, could be piloted at transfer stations, commercial facilities, and/or residential complexes. These tools would support:

- Real-time monitoring of disposal practices.
- Identification of high-risk areas for non-compliance.
- Prioritization of enforcement and education efforts.

While the District does not manage waste containers directly, it can play a key role in encouraging and coordinating the adoption of RFID-tagged bins by municipalities and haulers, as this technology supports improved compliance monitoring, service optimization, and data-driven planning. DEF could facilitate pilot programs with municipalities that are interested in testing RFID systems by helping identify vendors, best practices, and/or funding opportunities, and could then integrate collected RFID data (where available) to targeted outreach and education, recognition for high-performance buildings, and/or to identify areas needing support.

To encourage participation and celebrate success, DEF could implement tiered recognition program for businesses and municipalities that demonstrate exemplary waste reduction efforts.

While direct grants may not be feasible, DEF can offer technical assistance, promotional support, and public recognition to help entities adopt sustainable materials management practices and share their achievements. Building on models such as LEED certification and NYC DOH restaurant grading, DEF could develop a branded DEF Sustainability Scorecard or DEF grading system. This framework would assess participants based on criteria such as waste diversion rates, contamination reduction, staff training, and use of sustainable purchasing practices. Recognition tiers (e.g., Bronze, Silver, Gold) could be awarded annually, with top performers receiving public accolades, digital badges, and inclusion in DEF promotional materials. This approach would incentivize continuous improvement while making sustainability efforts more visible and measurable.

Enforcement-focused public education and outreach should be integrated throughout every step of this strategy. This could include training programs for waste haulers and facility operators to ensure proper handling and sorting of materials, as well as community workshops to educate residents about recycling policies, contamination risks, and best practices for waste reduction.

While formal enforcement of illegal dumping falls under the purview of the County's Solid Waste Commission, and is not currently a widespread issue in Westchester, DEF can still play a key role in supporting public engagement and reporting mechanisms that reinforce responsible disposal behaviors. Westchester already operates a hotline through which residents and businesses can report suspected violations. Building on this foundation, DEF could help increase public awareness of the hotline, improve accessibility of it, (e.g., through multilingual materials or online portals), and partner with local organizations to promote proper disposal practices. For example, Memphis, Tennessee's Illegal Dumping Enforcement Program demonstrates how community-based outreach, public reporting, and education can complement enforcement efforts. Although Westchester's needs differ, this model illustrates how targeted engagement and public involvement can enhance compliance and support broader waste diversion goals.

To support effective enforcement, DEF can play a facilitative role by coordinating with the County's Solid Waste Commission (SWC), NYSDEC, and interested municipalities to align inspection findings, public education, and outreach strategies. DEF can help identify trends in non-compliance, share best practices, and support the development of model local recycling ordinances. These ordinances could empower municipalities to adopt consistent expectations, and, where appropriate, establish their own compliance mechanisms. Collaboration with NYSDEC could further strengthen this approach by aligning local strategies with state regulations and exploring funding or technical assistance opportunities.

In summary, it is recommended that the following actions are taken:

- Implement smart waste-tracking technology;
- Incentivize compliance through positive reinforcement;

- Increase the number of inspectors; and
- Designate a waste compliance task force.

As with all recommended strategies, maximizing enforcement is scalable. DEF could begin by piloting targeted initiatives, such as route-level contamination tracking, or coordinated outreach in high-violation areas, while exploring partnerships and funding opportunities to support broader implementation. By integrating enforcement with education and strategic coordination, Westchester can strengthen compliance and ensure that waste reduction efforts are both effective and sustainable.

#### **4.7. Strategy 7: Support State-wide Extended Producer Responsibility**

Extended Producer Responsibility (EPR) is a policy approach that shifts the responsibility for managing post-consumer waste from municipalities and taxpayers to the producers of goods. As New York advances its commitment to EPR, municipalities play a crucial role in ensuring successful implementation. By integrating EPR principles into local waste management strategies, the County can help drive systemic change, reduce environmental impact, and shift the financial burden of waste disposal from taxpayers to producers. This topic was also explored in the public and stakeholder outreach effort, as mentioned in Section 3 of this report.

Municipal governments play a vital role in advocating for stronger Extended Producer Responsibility (EPR) policies at the state level. To align with statewide EPR efforts, this strategy recommends continued County support for New York's legislative initiatives, such as those addressing packaging, mattresses, and batteries, through coordination with environmental coalitions, data sharing with state agencies, and engagement with industry stakeholders. DEF can help amplify these efforts by endorsing aligned policy goals and promoting standardized recycling guidelines and mandatory producer participation. These efforts aim to secure financial contributions from manufacturers to offset municipal waste management costs and advance equitable, sustainable materials management across the region.

As of early 2025, eight states have enacted EPR laws for packaging, including paper and plastic: California, Colorado, Maine, Maryland, Oregon, New Jersey, Minnesota, and Washington. Maine was the first state to implement such laws in 2021. New York legislators have introduced bills for plastic and paper packaging EPR legislation since 2021, but none have been approved to date. The New York Product Stewardship Council (NYPSC) continues to advance the support for the legislation with both manufacturers and legislative representatives. A representative from Westchester County DEF currently sits on the NYPSC board to stay up to date on EPR legislation.

According to The Recycling Partnership, states with EPR policies can see significant increases in their recycling rates. For example, Colorado went from a 21% recycling rate to a 70% recycling

rate, and an increase in Washington State from 52% to 75%.<sup>24</sup> Theoretically, with EPR legislation at the state level, Westchester County could see an increase in overall residential recycling rates by 23 percentage points.

In addition, the County could expand its current efforts to educate residents on relevant producer recycling programs already happening in the community, emphasizing proper disposal guidance to residents, and the benefits of EPR including cost savings and improved waste management efficiency. Expanding the local infrastructure to include drop-off locations and/or mail-back programs for EPR-covered materials ensures higher participation and compliance in EPR programs and overall waste reduction.

#### **4.8. Strategy 8: Expand and Enhance Green Purchasing Opportunities**

To maximize waste reduction across County operations, Westchester should undertake a comprehensive review of relevant policies, including purchasing requirements, construction and demolition (C&D) protocols (as discussed in the prior C&D Diversion strategy), and other internal standards that influence material use and disposal. Westchester County's existing Environmentally Preferable Purchasing (EPP) policy and Buying Green guidelines reflect a commitment to waste reduction by promoting procurement practices that prioritize environmental stewardship. EPP has been incorporated into the County's general procurement policy, making sustainability a priority in purchasing decisions. The County has also joined the New York State Green Purchasing Communities Program. The County encourages the purchase of products made with recycled content, energy-efficient materials, and lower-impact packaging, ensuring that public spending aligns with broader waste reduction and resource conservation goals. The policy also directs buyers to seek out green-certified alternatives, including Energy Star-certified appliances and specifications from the New York State Green Purchasing Community. While the policy promotes sustainable purchasing, there is currently no mandated minimum recycled content requirement. DEF could work with County departments to incorporate minimum recycled content standards into contracting language for commonly available recycled goods, offering a practical and flexible way to strengthen procurement practices within existing frameworks. Expanding this approach to enhance waste reduction could involve several strategic actions:

1. Wherever possible draft County procurement and contract documents to permit use by local municipal, and regional county governments to streamline the procurement process regionally and provide greater incentive for businesses to provide recycled and green products.
2. Maintain an online list of green and recycled content contracts available for use by other municipalities. This, combined with number 1, herein, would ease the burden on local

---

<sup>24</sup> [https://www.forbes.com/sites/jeffkart/2023/02/11/us-recycling-rates-could-increase-by-almost-50-with-itty-bitty-fees-for-extended-producer-responsibility/?utm\\_source=chatgpt.com](https://www.forbes.com/sites/jeffkart/2023/02/11/us-recycling-rates-could-increase-by-almost-50-with-itty-bitty-fees-for-extended-producer-responsibility/?utm_source=chatgpt.com)

- municipalities when seeking to make green and recycled product purchases and encourage the use of these contracts.
3. **Implementing Minimum Recycled Content Standards.** Establishing clear minimum requirements for recycled content in office supplies, readily available construction materials, and packaging would ensure consistency across municipal purchasing and support County-wide sustainability goals. Tiered thresholds, such as 30% post-consumer recycled paper and 50% recycled-content plastic, can progressively raise benchmarks over time. However, it is important to recognize that not all products are commercially available with recycled content, or those that do not meet operational performance standards. Therefore, this strategy should focus on commonly available products within the County. In order to avoid issues with specialty or time-sensitive items, the County should:
    - Develop an exception protocol.
    - Maintain a preferred product list that is regularly updated based on market availability.
    - Encourage vendors to expand recycled-content offerings through bid specifications and supplier engagement.
  4. **Developing Local Supplier Partnerships.** Supporting businesses that specialize in remanufactured, refurbished, or reclaimed goods would create a circular economy model within the County. While direct bid preferences may not be legally permissible under NYS procurement law, the County can encourage sustainable procurement by incorporating environmental criteria into “best value” evaluations and RFP scoring frameworks. This approach would allow departments to prioritize suppliers that meet sustainability and waste reduction benchmarks, such as the use of recycled materials or local sourcing, while remaining compliant with competitive bidding requirements. Promoting these criteria through outreach and technical assistance can help local suppliers align with County goals and expand community-driven waste diversion efforts.
  5. **Incorporate C&D diversion preferences into County-funded projects,** ensuring that deconstruction, salvage, and recycling practices are embedded in capital planning and contractor expectations.
  6. **Identify opportunities to update facility operations, vendor contracts, and reporting protocols to reinforce diversion targets and track progress.**

By reviewing these interconnected policies collectively, the County can promote consistency, minimize waste across departments, and lead by example in advancing circular economy principles. The policy framework outlined in this strategy builds on the County’s commitment to sustainable procurement by integrating minimum recycled content standards, preferred vendor criteria, enhanced transparency, and circular economy practices. It also aligns with New York State’s sustainability objectives, including Executive Order 4, which establishes sustainable procurement policies at the state level.

#### **4.9. Strategy 9: Emerging Material Recovery Facility Technologies**

Recent innovations in material recovery facilities (MRFs) are reshaping the landscape of recyclables sorting. As single-stream and dual-stream recycling become increasingly prevalent, the complexity of separating mixed materials has outpaced traditional manual and mechanical methods. To address these challenges, facilities are adopting advanced sorting technologies that leverage artificial intelligence (AI), robotics, and sensor-based systems to improve efficiency, accuracy, and throughput.

AI-powered systems use computer vision to recognize materials based on visual cues, activating robotic arms to separate targeted items with speed and precision. Once limited to pilot programs, these technologies are now operational in select high-volume urban MRFs across the U.S.. The District is actively implementing some of these innovations, including planning the installation of a robotic arm and two vision systems to evaluate performance in real-time. This positions the District as an early adopter in New York State, with the potential to increase sorting precision. Monitoring outcomes from the District's implementation may inform future investment decisions and regional planning.

Optical sorting systems—already in place at DEF's MRF—use high-resolution cameras and sensors to detect materials based on color, transparency, and chemical composition. DEF recently upgraded the MRF optical sorters with models offering the latest technology.

Near-Infrared (NIR) sorting further enhances precision by identifying materials based on their unique spectral signatures, enabling separation by polymer type or chemical composition. These systems are particularly effective in distinguishing plastics and organic materials, even under challenging conditions such as contamination or mixed waste streams.

To maximize the benefits of these technologies, MRFs should prioritize modular, scalable systems that align with facility constraints, incorporate real-time data analytics to monitor performance and contamination rates, and engage in cross-sector collaboration to accelerate adoption of best practices. Partnerships with manufacturers offering sorting trials could help validate performance under local waste stream conditions, alongside assessments of compatibility with existing conveyor configurations and throughput requirements.

By proactively researching and implementing advanced sorting technologies, DEF has positioned itself at the forefront of sustainable waste management by enhancing recovery rates, reducing disposal dependency, and advancing circular economy goals.

#### **4.10. Strategy 10: Promote Reuse and Repair Cafés**

To strengthen waste reduction efforts and promote circular economy principles, Westchester County can partner with Reuse and Repair Cafés to highlight and connect residents to existing reuse and repair resources across the region. This strategy builds on successful models such as

Tompkins County's Reuse Trail and Ithaca's Repair Café, which have demonstrated the power of community-driven reuse systems to reduce waste, foster local engagement, and support economic development.

This effort could link thrift stores, repair cafés, makerspaces, tool libraries, and donation centers to residents using the County's broad communications platforms, including tourism channels, community outreach, and sustainability campaigns. A digital directory would make these resources more accessible to residents and visitors, helping them locate nearby reuse and repair opportunities while encouraging participation in local waste reduction efforts.

To deepen community engagement, DEF might sponsor repair events offered by local, community groups that could be hosted at libraries, reuse spaces, and community centers. These events would be supported by local vocational programs, skilled volunteers, and nonprofit partners, creating opportunities for skill-sharing, workforce development, and social connection. By fostering a culture of repair and reuse, the County can extend product lifespans, reduce disposal rates, and build local resilience.

This strategy leverages existing infrastructure and partnerships, making it highly scalable and cost-effective. Rather than constructing new facilities, it focuses on coordination and outreach, allowing Westchester to amplify the impact of programs already in place. The County's role would include:

- Creating and maintaining a digital and printed directory of participating locations;
- Coordinating with libraries, schools, and community centers hosting repair events;
- Partnering with vocational programs and nonprofits to support staffing and training; and
- Promoting the network through tourism, sustainability, and community engagement channels.

By connecting and elevating existing reuse and repair resources, Westchester County can build a visible, accessible, and inclusive reuse ecosystem that reduces waste, supports local economies, and celebrates community ingenuity.

#### **4.11. Strategic Takeaways**

Overall, the recommended strategies outlined above form a cohesive, data-informed framework for advancing Westchester County's waste reduction and sustainability goals. These strategies are grounded in findings from the 2021 Stony Brook University waste characterization study, public surveys, stakeholder meetings, and direct input from DEF staff. Together, they span short-, mid-, and long-term implementation horizons and emphasize scalable solutions across education, infrastructure, equity, enforcement, and policy reform.

Several recommendations directly respond to documented gaps, such as lower recycling participation in more urban areas, by proposing targeted outreach, expanded composting

infrastructure, and school-based education programs. Others build on DEF’s current and planned initiatives, including the installation of robotics and vision systems at the MRF, the “Oops Sticker” curbside feedback program, and the RFSTAD and CompostED organics efforts.

To operationalize these strategies, the County must also address current limitations. Broad recommendations like increasing inspections and outreach are paired with actionable steps, such as partnering with community organizations, recruiting volunteers or interns, and leveraging digital tools. However, scaling these efforts will likely require increased DEF staffing capacity, particularly to support expanded outreach in urban areas and to manage new pilot programs. The integration of public-private partnerships, smart enforcement tools, and sustainable procurement policies will further strengthen the County’s ability to build a resilient, inclusive, and circular waste management system.

<b>Recommended Strategy:</b>	<b>Source of Insight:</b>	<b>Connection to Findings and/or DEF Work:</b>
Expand Organics Management	Stony Brook study; DEF programs	High food waste percentage in MSW in South Yonkers (31%); builds on RFSTAD and CompostED programs
Get Back to Basics – Recycling Education Campaign	Public surveys; DEF outreach	Addresses low program awareness and contamination; builds on “Oops Sticker” program
Increase Multi-Family Building Outreach	Stakeholder meetings; DEF staff	Barriers in multi-family housing; supports inclusive outreach and program accessibility
Support Municipal and Commercial C&D Diversion	DEF infrastructure	Responds to C&D volume; builds on CompostED model and public works coordination
Maximize Diversion from the Commercial Waste Stream	DEF staff; peer programs	DEF is actively installing robotics and vision systems—this strategy builds on current momentum.
Maximize the Benefits of Enforcement	DEF inspections; stakeholder feedback	Feedback on inconsistent compliance and need for clearer enforcement protocols. Supports Source Separation Law; clarifies DEF’s facilitative role.
Support State-wide Extended Producer Responsibility	DEF staff; County initiatives	Builds on existing EPP policy and addresses gaps like minimum recycled content standards. Aligns with NYSDEC goals; supports advocacy.
Expand and Enhance Green Purchasing Opportunities	DEF staff; stakeholder input	Addresses procurement gaps; supports internal policy alignment.
Emerging Material Recovery Facility Technologies	DEF initiatives; industry trends	Reflects current robotics and optical sorter upgrades at DEF’s MRF.
Promote Reuse and Repair Cafes	DEF staff; peer community models	Aligns with circular economy goals; complements reuse center discussions

## 5.0 BENCHMARKING COMPARISONS

### 5.1. Stony Brook Report Key Findings

Stony Brook University conducted a waste stream analysis, quantifying and categorizing the County's waste streams into MSW Disposal and Recyclables Diversion. The waste sort was conducted in 2021 over 8 days from July 13<sup>th</sup> to August 16<sup>th</sup> at the Yonkers MRF. MSW, paper, and commingled containers samples were collected from three target areas (Dobbs Ferry, Greenburgh, and South Yonkers) and from the tipping floor of the Yonkers MRF.

Key takeaways from Stony Brook University's waste stream analysis include the following:

- **Curbside Recycling Participation.** The curbside recycling program diverted 22% of MSW in Greenburgh, 20% in Dobbs Ferry, and 9% in South Yonkers. This indicates room for improvement, particularly in South Yonkers. Increased countywide education is necessary to encourage or require residents to participate, with a focus on improving South Yonkers' diversion rates.
- **Potential for Increased Recycling.** About 20% of the MSW stream consisted of materials that could be diverted for curbside recycling (paper and container materials identified in Section 2). South Yonkers had a higher percentage of recyclables in its MSW (approximately 28%) than Dobbs Ferry (approximately 18%) and Greenburgh (approximately 15%), suggesting an opportunity to improve diversion rates.
- **Source-Separated Paper Recyclables.** Only about 5% contamination was observed across the paper recyclables. Old Corrugated Cardboard (OCC) comprised about two-thirds of the non-contaminated 95% of source-separated paper recyclables. South Yonkers showed higher contamination (greater than 10% contamination) compared to other areas, but these levels are considered low relative to other jurisdictions in New York.
- **Source-Separated Commingled Container Recyclables.** Of the source-separated container recyclables, contaminants accounted for about 20-25% of the material, which included other plastics (that are not acceptable in the program) and food. These contamination percentages are considered average and in line with other current recycling programs in New York.
- **Yard Waste.** Yard waste made up less than 5% of the MSW stream overall, while in Dobbs Ferry it was about 10%.
- **Food Waste.** Food waste comprised approximately 25% of the MSW stream. South Yonkers had a slightly higher percentage of food waste in its MSW (approximately 31%) than Dobbs Ferry (approximately 23%) and Greenburgh (approximately 20%). This indicates an opportunity for greater diversion of food waste through composting or other means.
- **Waste Diversion in Urban Areas.** The curbside recycling and food waste diversion rates are lower and the recycling contamination rate is higher in South Yonkers than Dobbs Ferry and Greenburgh. This is most likely caused due to the difference in demographics of these areas; South Yonkers is a more urban area. Urban areas tend to face increased

recycling challenges such as limited space, high population density, and economic barriers. These barriers reflect both financial and broader structural challenges. Residents in lower-income communities may lack access to private transportation, making it difficult to reach drop-off sites or attend outreach events. Multi-family housing units may have limited space for storing recyclables or separating materials, and tenants often rely on landlords or property managers to provide adequate signage and bins. Time constraints, competing priorities, and limited access to information can further reduce participation. Addressing these barriers requires context-sensitive outreach that acknowledges lived realities and builds trust through clear communication, accessible infrastructure, and partnerships with community organizations that already serve these populations.

Given that compostable material (food and paper) constitutes a significant portion of the waste stream, DEF's existing programs promoting food waste and compostable materials disposal require broader and more targeted outreach. Currently, these programs may not reach all residents, and increasing public awareness is critical to reducing disposed organics and improving County-wide composting rates. To that end, to further inform the public, DEF could:

- Partner with municipalities to include program details in tax mailings, or recycling calendars.
- Launch compost-focused social media campaigns, local radio spots, and community newsletter and email blast features.
- Provide targeted information at the tabling events that DEF already attends such as farmers markets and other community events, and/or distribute informative materials to libraries and schools where residents could ask questions and pick up free starter kits or signage.
- Collaborate with tenant associations to reach multi-family housing residents.

To understand barriers and engage non-participants, DEF could:

- Conduct targeted surveys in neighborhoods with low participation, using QR codes or brief intercept interviews at public events.
- Analyze program registration data and service requests to identify geographic gaps.
- Offer focus groups or listening sessions with residents who have not participated, to gather feedback on accessibility, cost, and convenience.
- Work with haulers to identify routes or buildings with low organics set-out rates, and follow up with tailored outreach.

Currently, participation in the organics diversion program is voluntary and based on residents choosing to bring food scraps to designated drop-off sites. While the infrastructure exists, barriers such as limited transportation access, and competing priorities may prevent broader participation, particularly in urban areas. Outreach efforts should focus on increasing visibility

and accessibility of drop-off locations, clarifying what materials are accepted, and addressing logistical challenges faced by residents in multi-family housing or underserved neighborhoods. These efforts would help DEF refine its messaging, remove participation barriers, and build a more inclusive and effective organics diversion program.

The programs that are currently in place in the District cover all aspects of waste generation and separation. The weak point in the current system appears to be public knowledge and accessibility, rather than the availability of programs. Emphasizing education may be the most impactful starting point. A more informed and engaged public, especially in areas like South Yonkers, could lead to higher participation rates and improved waste diversion.

An increased emphasis on outreach and education in urban areas, such as Yonkers and Peekskill, where Household Recycling Days (HRDs) are already held, is warranted. These events provide valuable touchpoints for engaging residents who may face barriers to participation, including limited transportation access or lack of program awareness.

To deepen impact, DEF could consider shifting the geographic balance of outreach events, holding a greater share in urban areas while maintaining overall event volume. While expanding the number of events would enhance reach, this would likely require additional staffing capacity, which has been a persistent challenge for DEF and may limit the ability to scale outreach countywide.

To address this, DEF could:

- Partner with community organizations to co-host events.
- Recruit volunteers or interns to support logistics and engagement.
- Leverage digital outreach tools (e.g., webinars, social media campaigns) to supplement in-person efforts.
- Use HRD events as listening sessions, gathering feedback from urban residents on barriers to participation and identifying feasible program modifications.

By acknowledging staffing constraints and exploring collaborative solutions, DEF can continue to expand its reach and responsiveness in urban communities without overextending internal resources.

The waste stream analysis conducted by Stony Brook University suggests that while DEF's programs are available throughout the District, awareness and participation levels vary, particularly in larger urban areas such as South Yonkers. This indicates a need for enhanced public education and outreach to ensure residents understand what programs exist and how to access them.

In urban communities, where issues like food insecurity may take precedence over food waste recycling, outreach efforts should be context-sensitive and community-informed. DEF could collaborate with local organizations to:

- Integrate food waste diversion messaging into broader sustainability and food access initiatives.
- Co-host events that address both waste reduction and community wellbeing.
- Engage residents who are not currently participating to understand perceived and actual barriers, such as accessibility, relevance, or competing priorities.

By tailoring outreach to reflect local needs and values, DEF can improve program visibility, foster trust, and increase participation in ways that support both environmental and community goals.

Examples from San Jose, CA, (as previously described in the C&D Diversion strategy), as well as Boulder County, CO, demonstrate that high diversion rates are achievable when communities pair robust recycling infrastructure with targeted outreach, financial incentives, and policy alignment. In both cities, (San Jose and Boulder), curbside recycling programs were strengthened through clear communication, performance-based contracts, and community engagement strategies that helped reduce contamination and increase recovery of recyclables. Westchester can draw on these models by conducting localized outreach campaigns in areas identified by the Stony Brook study as having lower participation. Additionally, DEF could partner with community organizations to co-host events and distribute materials, and/or explore potential incentive structures or recognition programs to encourage participation. By combining insights from the Stony Brook analysis with proven strategies from peer communities, DEF can build a more inclusive and effective recycling system that reaches and resonates with all residents.

## **5.2. Relevant Case Studies**

As municipalities across the United States strive for zero waste and sustainable resource recovery, certain local governments have emerged as leaders in waste reduction through comprehensive policies, infrastructure investments, and enforcement mechanisms. The following case studies illustrate the approaches of Prince George's County, MD; Fairfax County, VA; and Denver, CO; identifying best practices that can serve as models for other jurisdictions. These case studies were compiled through a review of publicly available municipal documents, sustainability plans, ordinances, and program websites. These specific locations were selected for comparison with Westchester County due to their similar demographic context, policy frameworks, infrastructure investments, and outreach strategies. By examining these peer communities, Westchester can identify scalable strategies and transferable best practices to accelerate zero waste goals.

### **5.2.1. Case Study 1: Prince George's County, MD**

Prince George's County, located just east of Washington, D.C., is one of Maryland's most populous and culturally diverse jurisdictions. As of mid-2024, the county is home to approximately 966,629 residents, with a median age of 38.5, reflecting a balanced mix of working-age adults, families, and older residents. The county is comprised of a majority-Black population, with 62% identifying as Black of African American. Household

dynamics show an average household size of 2.72 persons, with 344,586 households countywide. Economically, Prince George's County maintains a median household income of \$100,708, with a per capita income of \$45,287. Educational attainment is strong, with 86.7% of adults holding a high school diploma or higher, and 36.1% possessing a bachelor's degree or more. Additionally, 30.1% of residents speak a language other than English at home.

Prince George's County has developed a multi-pronged approach to waste reduction, leveraging data-driven planning and public-private partnerships to optimize diversion efforts. Some key elements include:

- Diversion Targets & Enforcement:
  - As of recent reporting, Prince George's County processes approximately 300,000 tons of MSW annually, with diversion rates exceeding 60%<sup>25</sup>, meaning roughly 180,000 tons are diverted through recycling, composting, and reuse programs.
  - Prince George's County has had recycling requirements in place for decades, but its current framework was significantly strengthened through a series of Council Bills targeting commercial requirements between 2012 and 2019:
    - CB-12-2018 Requires all commercial and industrial property owners, tenants, and operators to:
      - Provide equally sized and conveniently located recycling containers alongside trash containers, both indoors and outdoors.
      - Display a clear list of recyclable items near each container.
      - Implement a collection system for recyclables.
    - CB-87-2012 Targets multifamily, commercial, and industrial properties by mandating:
      - Opportunities for tenants to voluntarily recycle designated materials.
      - Annual recycling reports submitted by February 1.
      - Clear signage on recycling containers and program publicity.
    - CB-8-2017 Applies to special events with 100+ attendees, requiring:
      - Recycling receptacles adjacent to trash bins.
      - Distinct signage and color coding.
      - Reporting of recycling activities to the County.
  - Legislative measures like Council Bill 5-2015 (polystyrene ban) and Council Bill 52-2019 (single-use plastic ban) further demonstrate the County's commitment to waste reduction policies.
  - Businesses must submit Maryland Recycling Act (MRA) Tonnage Reports, either directly or via their haulers.

---

<sup>25</sup> [Waste & Recycling | Prince George's County](#)

- The County's Department of the Environment offers technical assistance to help businesses set up or improve recycling programs.
- Organics & Recycling Infrastructure:
  - A dedicated curbside food composting program and expanded materials recovery facilities (MRFs) support long-term waste diversion.
  - Planned optical sorters for plastic materials aim to further refine recycling efficiency.
- Community Engagement & Public Accountability:
  - The county conducts waste characterization studies to assess the effectiveness of its programs and identify improvement areas.
  - Nonprofit collaboration (Community Forklift) has resulted in the recovery of \$12 million worth of building materials, reinforcing circular economy principles.

#### Best Practice Takeaways:

Prince George's County operates one of the most comprehensive municipal composting programs on the East Coast. Exact staffing numbers are not publicly disclosed, but the Department of Environment oversees solid waste operations, including recycling, composting, and enforcement. The County supplements staff capacity through technical assistance partnerships and community engagement programs. Its PGC Composts initiative provides weekly curbside food scrap collection for eligible households, supported by a county-owned Organics Composting Facility using GORE™ cover technology. The county also integrates smart bins, community cleanups, and closed-circuit monitoring to reduce illegal dumping and contamination.<sup>26</sup>

#### Relevance to Westchester:

- Westchester could explore county-wide curbside organics collection, building on its current food scrap drop-off sites.
- Investment in a regional composting facility would reduce reliance on disposal as waste and support state mandates for food waste diversion.
- Prince George's model shows how public education, infrastructure, and enforcement can work in tandem.

It's important to note that Westchester DEF has already implemented several comparable initiatives, including legislation requiring conveniently located recycling containers and district signage, a single-use plastics ban (e.g., stirrers and splash sticks), hauler reporting requirements and optical sorter integration at regional facilities. This alignment reinforces Westchester's leadership and provides a strong foundation for scaling additional programs.

---

<sup>26</sup> Source: [Maryland Green Application Form](#)

### 5.2.2. Case Study 2: Fairfax County, VA

Fairfax County, located in Northern Virginia just outside of Washington, D.C., is one of the most populous and economically vibrant counties in the United States. As of mid-2024, the county is home to approximately 1.16 million residents, with a median age of 38.9, and a mature and highly educated population base. Fairfax County has 412,663 households, with an average household size of 2.75 persons. Economically, Fairfax County ranks among the wealthiest counties in the nation. The median household income is \$150,113, and the per capita income is \$69,971, with only 6.1% of residents living below the poverty line. 93.2% of adults hold a high school diploma or higher, and 64.3% possess a bachelor's degree. Additionally, 39% of residents speak a language other than English at home, highlighting the importance of inclusive public services. Fairfax County is continuing to grow steadily, with projections indicating a population of over 1.3 million by 2040.

Fairfax County has taken a strategic and government-wide approach to waste reduction, with a focus on policy integration across municipal facilities and institutions.

- Policy-Driven Waste Reduction Goals:
  - The county aims to reduce solid waste generation by 25% by 2030 and achieve 90% waste diversion through coordinated efforts, which encompass composting and recycling mandates for internal operations, sustainable procurement policies that reduce waste generation, and audits and reporting to track compliance and progress.
  - This goal is part of Fairfax's Zero Waste Plan, which focuses on institutional leadership rather than countywide residential diversion.
- Strong Institutional Recycling Compliance:
  - County government audits assess compliance with Fairfax's purchasing guidelines, requiring agencies to prioritize recycled-content products.
- Data Transparency & Operational Efficiency:
  - Government and school sector trash audits have helped pinpoint areas for improvement, leading to smarter waste tracking and waste reduction strategies.
  - The county integrates EPP policies to strengthen its sustainable procurement frameworks across municipal operations.

#### Best Practice Takeaways:

Fairfax County has launched Compost Outposts – small-scale, decentralized composting hubs at transfer stations. It also piloted textile recycling bins that diverted over 9 tons in three months. Westchester County's own curbside textile collection program has achieved even greater diversion, recovering approximately 40 tons through July 2025, demonstrating strong participation and measurable results. Fairfax's Zero Waste Plan

targets its municipal buildings, schools, and parks, with a strong emphasis on community engagement and behavior change.

Relevance to Westchester:

- Fairfax’s distributed composting model could inform Westchester’s expansion beyond drop-off sites. Fairfax’s “Compost Outposts” are small-scale composting stations located at transfer stations and municipal yards. These hubs accept food scraps and yard waste from residents and serve as decentralized drop-off points, similar to Westchester’s current food scrap sites. The outposts are designed to increase access without requiring full curbside service.
- Textile diversion aligns with Westchester’s existing program and could be scaled through retail partnerships or school-based initiatives.
- Fairfax’s municipal zero waste targets offer a framework for Westchester’s public facilities and events.

### 5.2.3. Case Study 3: Denver, CO

Denver, the capital of Colorado and a major urban hub in the Rocky Mountain region, is home to approximately 729,019 residents as of mid-2024. With a median age of 35.4, the city reflects a youthful population that is shaped by a strong influx of young professionals, students, and creatives. The city’s racial and ethnic composition is diverse, though it remains majority White (54%). Denver has 329,578 households, with an average household size of 2.12 persons, reflecting a high proportion of single-occupancy and non-family households. Economically, Denver maintains a median household income of \$91,681 and a per capita income of \$61,202. Approximately 23.6% of residents speak a language other than English at home, and 91.4% of adults hold a high school diploma or higher, with 55.6% possessing a bachelor’s degree or more. Denver’s workforce is concentrated in sectors such as healthcare, technology, education, and hospitality, supported by a robust network of universities and research institutions.

Denver has pursued ambitious waste diversion goals through legislative mandates, universal recycling accessibility, and significant infrastructure investments.

- Universal Recycling & Composting Access:
  - The Waste No More Ordinance (2022) requires multi-family and commercial buildings, as well as permitted events, to provide recycling and composting alternatives.
  - A phased-in C&D waste diversion plan establishes 50% diversion by 2025, 65% by 2028, and 80% by 2030 for construction projects.
- Infrastructure Development & Zero Waste Investment:
  - The city is investing in a comprehensive recycling expansion, targeting underserved communities and Zero Waste start-ups through grant funding.

- Denver is exploring barrier removal strategies for developing recycling infrastructure, ensuring long-term sustainability. These strategies include grant funding for Zero Waste startups and infrastructure development, technical assistance for underserved communities to adopt recycling and composting, and universal access mandates through the Waste No More ordinance<sup>27</sup>. These efforts aim to eliminate cost, access, and awareness to barriers to participation.
- Community Education & Enforcement Strategies:
  - Denver promotes a hierarchy-based compliance system, balancing education-first outreach with enforceable penalties.
  - The city has integrated equity-focused waste reduction strategies, prioritizing resource access for disadvantaged communities.

#### Best Practice Takeaways:

Denver's Waste No More ordinance mandates recycling and composting for all commercial buildings, multifamily residences, events, and construction sites. The city also supports extended producer responsibility (EPR) and is home to the Circular Economy Development Center, which fosters end-market development and material recovery innovation.

#### Relevance to Westchester:

- Denver's mandatory diversion policies could inspire Westchester to adopt county-wide commercial composting requirements or event-based recycling mandates.
- The Circular Economy Development Center model could inform Westchester's procurement strategies and support local reuse hubs.
- Denver's integration of construction and demolition recycling offers a path for Westchester to reduce bulky waste and support green jobs.

Examining the waste reduction frameworks of these three jurisdictions reveals several shared best practices that contribute to effective waste management. Key Takeaways for Westchester:

- Legislative Enforcement & Clear Policy Mandates. All three jurisdictions have zero waste ordinances or enforcement mechanisms that drive compliance.
- Infrastructure Investment & Material Recovery Strategies. Investment in recycling and composting facilities is a shared priority, with Prince George's County focusing on MRF optimization, Fairfax County expanding procurement incentives, and Denver implementing citywide collection accessibility at present.
- Public Engagement & Accountability Mechanisms. Each jurisdiction leverages data tracking and audits to refine their approaches and ensure policy effectiveness.

---

<sup>27</sup> [Denver's Universal Recycling and Composting Ordinance - City and County of Denver](#)

Westchester’s path forward could blend Prince George’s infrastructure, Fairfax’s community-scale pilots, and Denver’s policy mandates, while tailoring solutions to its unique mix of suburban municipalities and environmental justice concerns.

Opportunity	Prince George’s	Fairfax	Denver	Westchester Potential
Curbside Organics	Weekly pickup	Drop-off + Outposts	Mandatory for buildings	Expand the current voluntary and drop-off based organics program to potential mandatory curbside collection, either for residential, commercial, or both sectors.
Textile Diversion	County-wide	Pilot bins	Not specified	Westchester’s existing contract allows municipalities to opt into bin placement and curbside service. Scaling this program could mean increasing municipal participation in the bin program, expanding curbside collection to more residential areas, launch additional public awareness campaigns to boost usage, and/or partnering with schools or retailers to host additional collection points.
Infrastructure	County-owned MRF & compost site	Transfer station composting	Circular economy center	Evaluate investment in a regional composting facility, capable of processing food and yard waste at scale. This would reduce reliance on disposal, support curbside organics expansion, and align with state mandates.
Public Engagement	Clean Sweep, PGCLitter TRAK	Extensive outreach	Waste No More education	Strengthen multilingual outreach and equity focus. Equity-focused engagement means prioritizing outreach in historically underserved communities, providing multilingual materials and culturally relevant messaging, hosting events in transit-accessible urban areas, and ensuring that program design reflects community needs, such as food insecurity or housing density.

## 6.0 EXPLORING DISPOSAL ALTERNATIVES

The strategies recommended in Section 4.0 of this report provide a framework for Westchester County to aim at achieving the NYSDEC's goal of 85% waste diversion by 2050. Even with a successful comprehensive waste reduction and diversion program, sustainable disposal of the remaining waste will be required. While recognizing that no single waste management approach is suitable for managing all waste streams, the EPA developed a non-hazardous materials and waste management hierarchy<sup>1</sup>, ranking the various management strategies from most to least environmentally preferred. In this hierarchy, energy recovery, including combustion, pyrolyzation, gasification, and anaerobic digestion, is preferable to waste disposal methods, including landfilling.



During the public engagement phase of this study, a common theme of feedback was the call for closure of the WIN-Waste WTE facility. The following sections provide a brief review of potential disposal alternatives. While most options currently face logistical and environmental constraints, including high capital costs, long hauling distances, and limited developer interest, there may be emerging or underexplored local opportunities worth evaluating. These could include small-scale anaerobic digestion, regional partnerships for organics processing, or modular thermal technologies. Further feasibility analysis and stakeholder engagement could help identify viable pathways for future investment.

### 6.1. Traditional Waste-to-Energy Combustion

Combustion technology is extremely effective in reducing the ultimate disposal volume, often by 80-90 percent. The byproduct of the process is residual "bottom ash" (the portion of ash that is expelled from the furnace) and "fly ash" (the portion of ash that is removed from the flue gas stream). Often these streams are combined and sent to landfills under a Beneficial Use Determination (BUD) for use as alternative daily cover. Other alternative uses for WTE ash are being researched and additional options may become available in the future if the state is willing to issue BUDs for alternative uses, which could include using portions of the ash stream as an aggregate for road base and/or concrete block/cement production. These facilities are typically net exporters of power, as the steam produced from the combustion process is typically superheated and run through a turbine-generator to produce electrical power. A small

number of these facilities sell steam directly to a local end user. Newer technology allows higher efficiency heat recovery from the combustors, increasing energy production potential.

Westchester County maintains a disposal contract with the WIN-Waste WTE facility located in Peekskill and all non-recyclable waste collected at DEF's waste management facilities is sent to the WTE facility. The WIN-Waste facility is a privately operated facility; therefore, DEF does not have the authority to close the facility. If DEF were to terminate its disposal contract with the WTE facility, there is sufficient waste generated in other nearby municipalities to keep the WTE facility open. At the WTE facility, through an efficient combustion process that meets strict state and federal standards, waste is converted into renewable electricity and steam, which is used by a local laundry company. While there are emissions associated with the facility, emissions monitoring systems ensure air quality controls operate efficiently and that emissions are minimized. The emissions data collected are subject to daily calibration with National Institute of Standards-backed calibration standards to ensure accuracy, and an independent third party audits the data on a quarterly basis. In addition to reducing transportation emissions by providing a local waste disposal solution, according to WIN Waste, the equivalent of 648,000 barrels of oil needed to create the equivalent amount of energy is offset annually through this process<sup>28</sup>. This equates to approximately 278,640 metric tons of carbon dioxide emissions offset annually<sup>29</sup>.

## 6.2. Pyrolysis

Pyrolysis systems use a vessel which is heated to temperatures of 750°F to 1,650°F, in the absence or near absence of free oxygen. The temperature, pressure, reaction rates, and internal heat transfer rates are used to control pyrolytic reactions to produce specific synthetic gas (syngas) products. These syngas products are composed primarily of hydrogen, carbon monoxide, carbon dioxide, and methane. The syngas can be used in boilers, gas turbines, or internal combustion engines to generate electricity, or alternatively can be used in the production of chemicals. Some of the volatile components of MSW form tar and oil and can be removed for reuse as fuel. The balance of the organic materials that are not volatile, or liquid that is left as a char material, can be further processed or used for its adsorption properties (activated carbon). Inorganic materials form a bottom ash that requires disposal, although it is reported that some pyrolysis ash can be used for manufacturing brick materials. Under typical operations, the ash is landfilled. Pyrolysis of MSW has not been demonstrated to be commercially viable at the time of this report's publication. There are no commercially operating MSW pyrolysis facilities in North America.

---

<sup>28</sup> <https://winwastewestchester.com/>

<sup>29</sup> <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator-calculations-and-references#oil>

### 6.3. Gasification

Gasification is a similar process to pyrolysis, but which requires the partial oxidation of a feedstock to generate syngas. Oxygen must be provided for the reaction, but at a quantity less than is required for complete combustion. The primary syngas products are hydrogen and carbon monoxide with smaller quantities of methane produced at lower temperatures. Similar to pyrolysis, the syngas product may be used for heating, electricity generation, fuel, fertilizers or chemical products, or in fuel cells. Byproduct residues such as slag and ash are produced and require disposal in a landfill. Gasification of MSW has not been demonstrated to be commercially viable in the United States at the time of this report's publication.

### 6.4. Landfilling

Modern landfill technology in New York State reflects a significant advancement from open dumps to engineered waste containment systems designed to minimize environmental harm. These facilities are governed by stringent federal regulations under Subtitle D of the Resource Conservation and Recovery Act (RCRA) and state regulations under 6 NYCRR Part 360, overseen by the NYSDEC.

Modern landfills consist of an engineered double composite liner system, leachate collection and conveyance system, landfill gas collection infrastructure, and final cover system. The double composite liner system is designed to prevent leachate, a toxic liquid formed by decomposing waste, from contaminating groundwater. Leachate is collected through a network of pipes and treated at on- or off-site facilities.

Landfill gas, primarily methane and carbon dioxide, is another byproduct of organic waste decomposition in landfills. Landfill gas collection systems are designed to capture these emissions to prevent atmospheric release. In many facilities, the captured methane is used for energy production, supporting waste-to-energy goals and reducing greenhouse gas emissions.

Despite technological advances, landfills pose several environmental risks, which can be mitigated through proper design and monitoring:

- **Groundwater Contamination:** If liner systems fail or are compromised, leachate can migrate into surrounding soils and aquifers. Older or unlined landfills are particularly susceptible. However, groundwater monitoring wells surrounding the landfill are regularly sampled to detect any potential leaks.
- **Air Quality and Climate Impact:** Methane is a potent greenhouse gas, and incomplete landfill gas capture can result in fugitive emissions. According to the EPA, municipal solid waste landfills are the third-largest source of human-related methane emissions in the U.S.<sup>30</sup>.

---

<sup>30</sup> <https://www.epa.gov/ghgemissions>

- Land Use and Ecosystem Disruption: Modern landfills occupy large areas and can disrupt natural habitats. Siting often involves trade-offs between environmental protection and logistical proximity to waste sources.
- Long-Term Liability: Even after closure, landfills require decades of post-closure care, including monitoring and maintenance of liners and gas systems. Financial assurance mechanisms are required to ensure long-term site stewardship.

It should be noted that there is not a large regional MSW landfill near Westchester County. Thus, if the District's waste were to be landfilled, long distance hauling to either Western New York or hauling to a rail spur that transports waste out-of-state would likely be required. This hauling has negative greenhouse gas implications of its own.

### **6.5. Anaerobic Digestion**

Anaerobic digestion is a biological process by which microorganisms digest organic material in the absence of oxygen, producing a solid byproduct (digestate) and a gas (biogas). In the past, anaerobic digestion was used extensively to stabilize sewage sludge, but is more recently under consideration as a method to process the organic fraction of MSW. In anaerobic digestion, biodegradable material is converted by a series of bacterial groups into methane and carbon dioxide. In a primary step called hydrolysis, a first bacterial group breaks down large organic molecules into small units like sugars. In the acidification process, another group of bacteria converts the resulting smaller molecules into volatile fatty acids, mainly acetate, but also hydrogen and carbon dioxide. A third group of bacteria, the methane producers, or methanogens, produce a medium-Btu biogas consisting of 50-70% methane, as well as carbon dioxide. This biogas can be collected and used for a variety of purposes including electricity production or converted to high BTU natural gas. Anaerobic digestion facilities are used extensively for the treatment of agricultural waste, wastewater sludge, and food waste. Mixed MSW anaerobic digestion facilities are more common in foreign countries. Specific to the United States, few mixed MSW anaerobic digestion facilities exist, as the technology has not proven economically feasible. In New York State, there are many anaerobic digesters in operation in the wastewater and agricultural markets. Although some of these facilities accept off-site food waste, none have been identified as capable of processing mixed MSW, and it is unlikely that such facilities exist locally. Consequently, implementing mixed MSW anaerobic digestion at this location would require the construction of a new facility.

## **7.0 CONCLUSION**

Westchester County stands at a pivotal moment in its ongoing leadership in sustainable materials management. This Waste Reduction Study affirms the County's commitment to advancing a circular economy, reducing greenhouse gas emissions, and ensuring equitable access to waste reduction programs across all communities. Grounded in the principles of Zero Waste and aligned with New York State's Solid Waste Management Plan and Climate Leadership and Community Protection Act, the strategies outlined in this report provide a clear, actionable roadmap for future planning.

Through robust public engagement, detailed analysis of existing systems, and benchmarking against peer communities, this study identifies both opportunities and challenges in achieving the County's ambitious waste reduction goals. Key recommendations, which range from expanding organics diversion and reuse education to enhancing recycling education, enforcement, and policy alignment, are designed to build on the County's strong foundation while addressing emerging needs and regulatory shifts.

Importantly, this study centers environmental justice as a guiding principle, ensuring that all residents, particularly those in historically overburdened communities, benefit from cleaner, healthier, and more resilient waste systems. By integrating equity, innovation, and feasibility into every recommendation, Westchester County is well-positioned to lead by example and inspire broader regional and statewide progress.

The path forward will require continued collaboration among County departments, municipalities, businesses, and residents. With sustained investment, adaptive implementation, and transparent evaluation, Westchester can realize its vision of a more sustainable, inclusive, and waste-resilient future.

## **8.0 PROJECT TEAM ZERO WASTE CERTIFICATIONS**

The Barton & Loguidice (B&L) project team brings certified zero-waste expertise directly to the development of this Waste Reduction Study. Key staff assigned to this project hold both the TRUE Advisor Certification and the SWANA Zero Waste Certification, demonstrating competency in nationally recognized waste-prevention and materials-management practices.

These certifications ensure that the study’s methodology, recommendations, and performance estimates are grounded in current best practices and reflect a practical understanding of how zero-waste systems function in real-world settings.

### **TRUE Advisor Certification**

Project team members trained through the TRUE program are qualified in system-wide materials management, upstream waste prevention, sustainable purchasing, and diversion optimization. TRUE Advisors understand the documentation, measurement protocols, and operational strategies required to support high-performing zero-waste programs.

### **SWANA Zero Waste Certification**

SWANA’s Zero Waste Certification provides a technical foundation in integrated materials management, facility operations, contamination reduction, and policy frameworks that drive measurable diversion outcomes. Staff certified through SWANA contribute expertise in designing programs that balance operational practicality with environmental performance—key to developing recommendations that the client can implement efficiently and cost-effectively.

**APPENDIX A**

**List of Materials Accepted at the Household Material Recovery Facility (H-MRF)**

Comprehensive list of materials accepted at the Westchester County Household Material Recovery Facility (H-MRF), based on the information publicly available on the county website: [Household Material Recovery Facility \(H-MRF\)](#) Accessed November 17, 2025.

## Appendix A: List of Materials Accepted at the Household Material Recovery Facility (H-MRF)

Category	Materials Accepted
Automotive / Vehicle-Related	<ul style="list-style-type: none"> <li>• Automotive fluids (except motor oil)</li> <li>• Car tires (with or without rims; limit 4)</li> </ul>
Household Chemicals / Hazardous Liquids	<ul style="list-style-type: none"> <li>• Household cleaners</li> <li>• Flammable liquids (kerosene, butane, lighter fluid, turpentine)</li> <li>• Metal/jewelry/furniture polishes</li> <li>• Wood preservatives &amp; stains</li> <li>• Pesticides, insecticides, herbicides</li> <li>• Photographic chemicals</li> <li>• Pool chemicals</li> </ul>
Paint / Coatings (PaintCare Program)	<ul style="list-style-type: none"> <li>• Latex, acrylic, water-based, oil-based, alkyd paints</li> <li>• Primers, sealers, undercoaters</li> <li>• Stains, varnishes, shellacs, lacquers</li> <li>• Waterproofing sealers (non-tar)</li> <li>• Metal coatings, rust preventatives</li> <li>• Field &amp; lawn paints</li> </ul>
Batteries	<ul style="list-style-type: none"> <li>• Vehicle/lead-acid batteries</li> <li>• Rechargeable batteries (Li-ion, NiMH, etc.)</li> <li>• Button-cell batteries</li> </ul>
Lighting / Lamps	<ul style="list-style-type: none"> <li>• Fluorescent tubes and CFLs</li> <li>• LEDs</li> </ul>
Mercury-Containing Devices	<ul style="list-style-type: none"> <li>• Mercury thermometers</li> <li>• Mercury thermostats</li> </ul>
Fire Safety Devices	<ul style="list-style-type: none"> <li>• Fire extinguishers</li> </ul>
Propane / Gas Tanks	<ul style="list-style-type: none"> <li>• Propane tanks (up to 20 lb)</li> </ul>



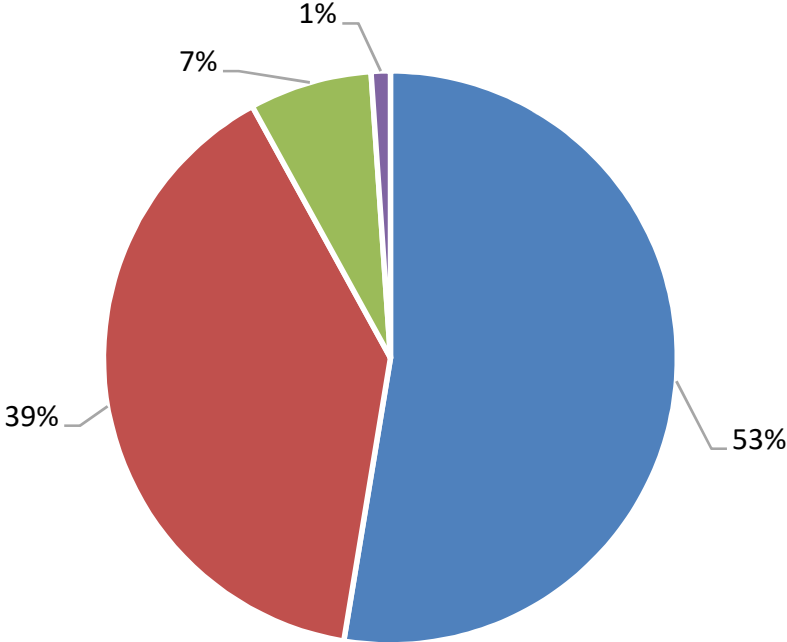
Electronic Waste (E-Waste)	<ul style="list-style-type: none"> <li>• Computers, monitors, TVs, phones, peripherals</li> </ul>
Appliances (Refrigerant-Containing)	<ul style="list-style-type: none"> <li>• Air conditioners, refrigerators, dehumidifiers</li> </ul>
Textiles	<ul style="list-style-type: none"> <li>• Clothing, shoes, boots, cleats</li> <li>• Accessories (belts, handbags, scarves, hats, gloves)</li> <li>• Linens/fabrics (clean, dry, odorless)</li> </ul>
Cooking / Kitchen Waste	<ul style="list-style-type: none"> <li>• Cooking fats, oils, grease (FOG)</li> </ul>
Documents / Paper	<ul style="list-style-type: none"> <li>• Personal confidential documents (limit: four 10×12×15" boxes)</li> </ul>
Pharmaceuticals / Medications	<ul style="list-style-type: none"> <li>• Expired/unused medications (first Tuesday monthly)</li> </ul>

<b>Category</b>	<b>Materials Not Accepted</b>
Hazardous Construction Materials	<ul style="list-style-type: none"> <li>• Asbestos</li> <li>• Construction &amp; demolition debris (wood, shingles, drywall, etc.)</li> </ul>
Explosive or Dangerous Items	<ul style="list-style-type: none"> <li>• Explosives</li> <li>• Fireworks</li> <li>• Bullets and ammunition</li> <li>• Flares</li> </ul>
Medical Waste	<ul style="list-style-type: none"> <li>• Medical sharps (needles, syringes)</li> <li>• Medical waste of any kind</li> </ul>
Household Items Not Accepted	<ul style="list-style-type: none"> <li>• Smoke detectors</li> <li>• Fire detectors</li> <li>• Plastic bags (must go to retail drop-off locations)</li> </ul>
Batteries Not Accepted	<ul style="list-style-type: none"> <li>• Single-use alkaline batteries</li> <li>• Carbon-zinc batteries</li> </ul>
Electronics Not Accepted	<ul style="list-style-type: none"> <li>• Solar panels (including portable solar chargers)</li> </ul>
Liquids Not Accepted	<ul style="list-style-type: none"> <li>• Motor oil</li> </ul>
Paper Not Accepted	<ul style="list-style-type: none"> <li>• Documents from businesses, institutions, or commercial sources (shredding is residential only)</li> </ul>

**APPENDIX B**  
**Public Participation Survey Data**

**Westchester County Residential Waste Reduction and Recycling Survey Results**

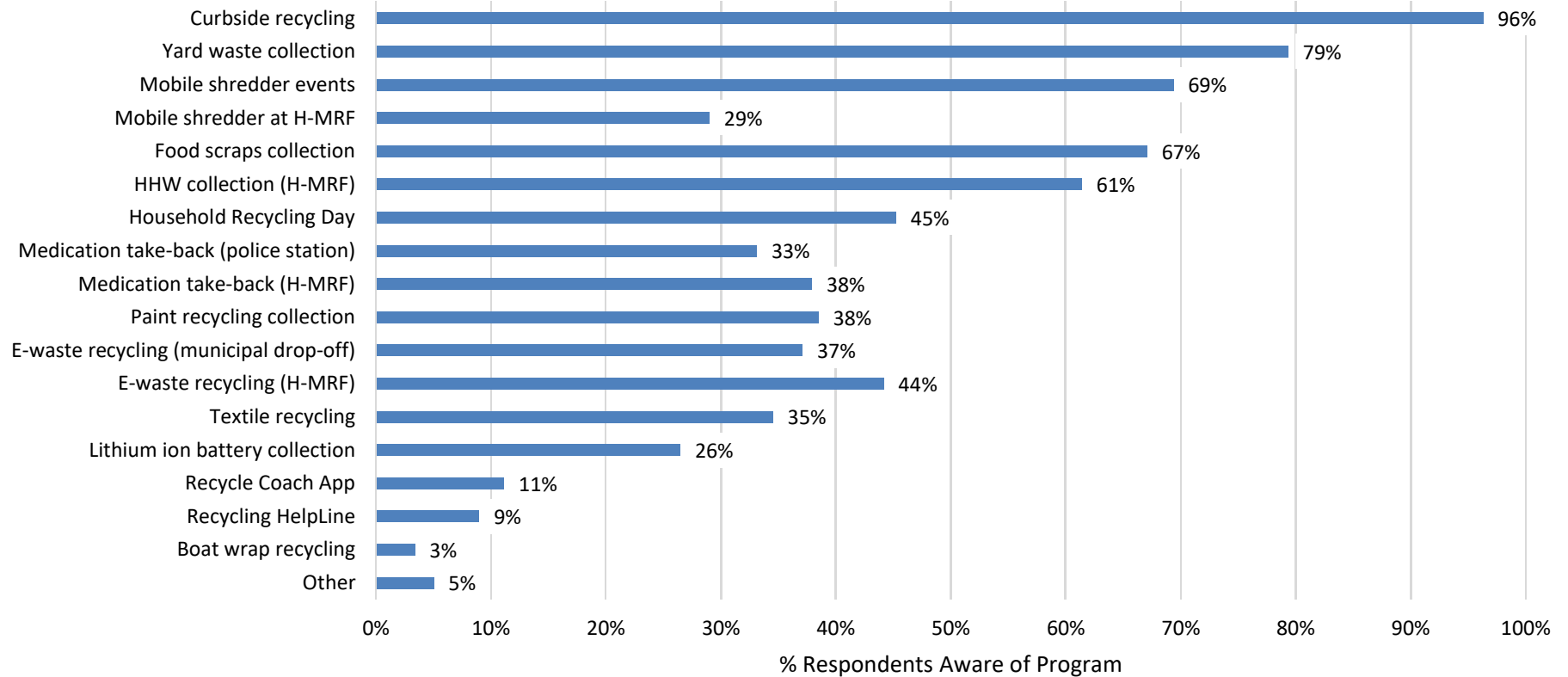
1. How familiar are you with the garbage and recycling services that are currently available to residents in Westchester County?



■ Somewhat familiar   ■ Very familiar   ■ Not very familiar   ■ Not at all familiar

## Westchester County Residential Waste Reduction and Recycling Survey

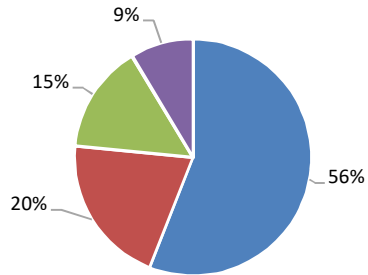
2. Of which of the current residential garbage and recycling services are you aware?  
(Select all that apply)



## Westchester County Residential Waste Reduction and Recycling Survey

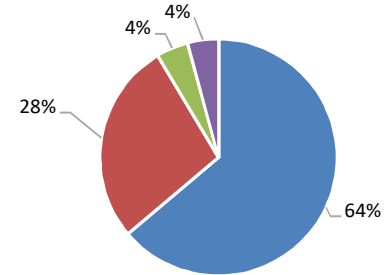
3. How often do you use the previously listed recycling services (other than curbside recycling)?

### Usage: Textile recycling (curbside or drop off)



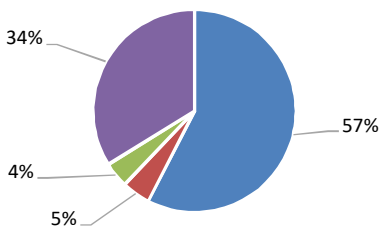
■ Never  
■ Rarely (1-2 times per year)  
■ Occasionally (3-5 times per year)  
■ Frequently (6 or more times per year)

### Usage: Household Recycling Day event



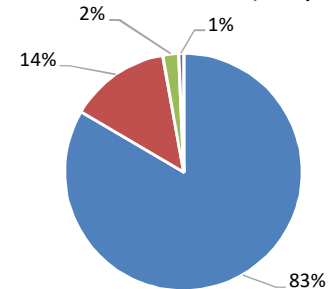
■ Never  
■ Rarely (1-2 times per year)  
■ Occasionally (3-5 times per year)  
■ Frequently (6 or more times per year)

### Usage: Food scraps collection in participating municipalities (curbside or drop off)



■ Never  
■ Rarely (1-2 times per year)  
■ Occasionally (3-5 times per year)  
■ Frequently (6 or more times per year)

### Usage: Medication take-back (drop off at H-MRF)

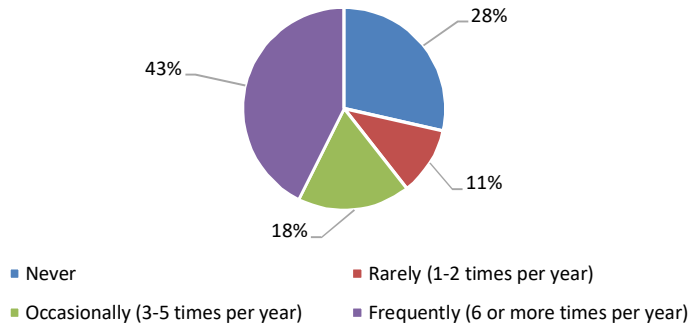


■ Never  
■ Rarely (1-2 times per year)  
■ Occasionally (3-5 times per year)  
■ Frequently (6 or more times per year)

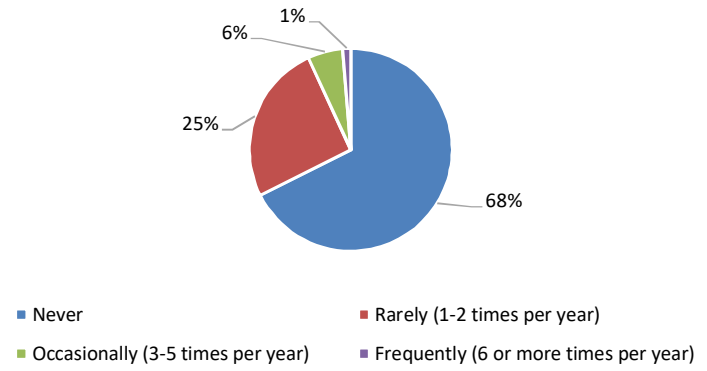
## Westchester County Residential Waste Reduction and Recycling Survey

3. How often do you use the previously listed recycling services (other than curbside recycling)?

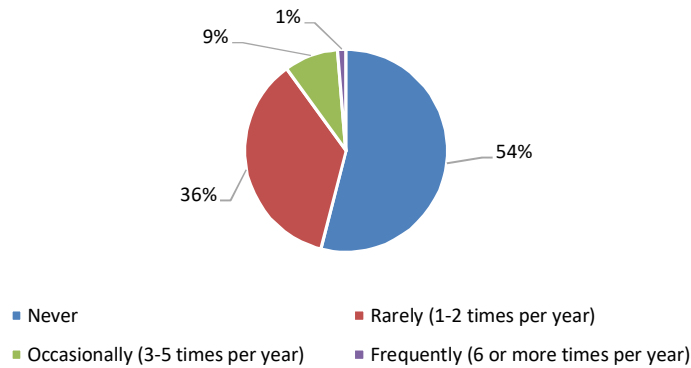
Usage: Yard waste collection in participating municipalities (curbside)



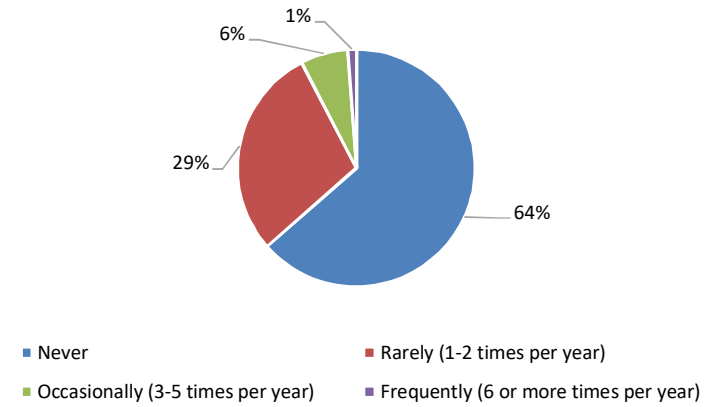
Usage: Medication take-back (drop off at police station)



Usage: Household hazardous waste collection (drop off at H-MRF in Valhalla)



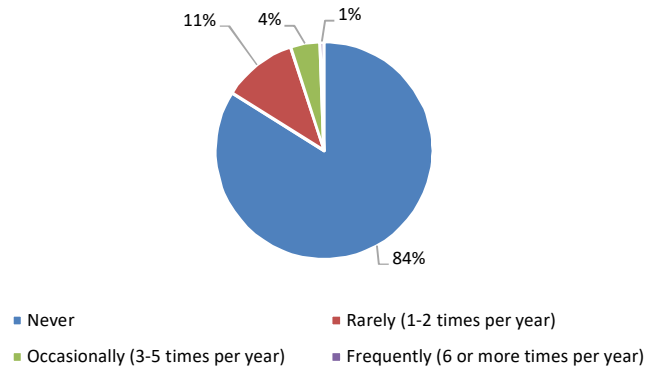
Usage: Mobile shredder events



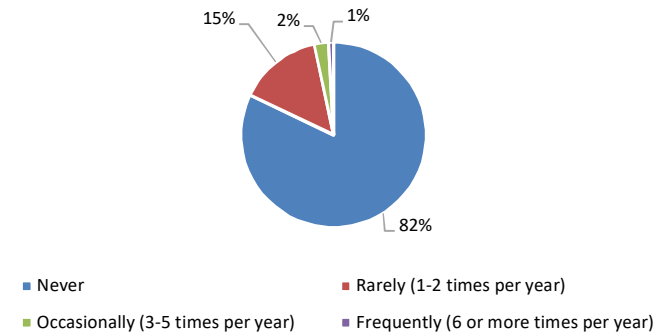
## Westchester County Residential Waste Reduction and Recycling Survey

3. How often do you use the previously listed recycling services (other than curbside recycling)?

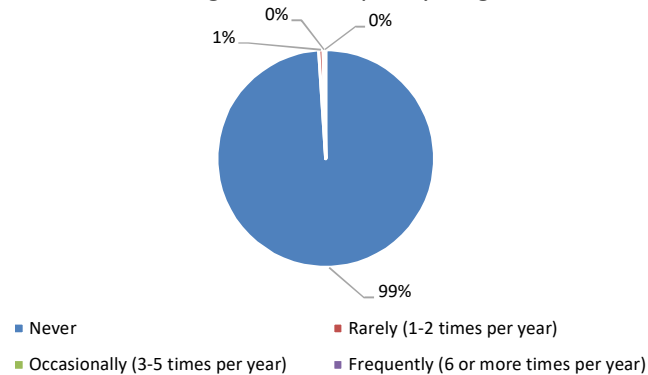
Usage: Mobile shredder at H-MRF



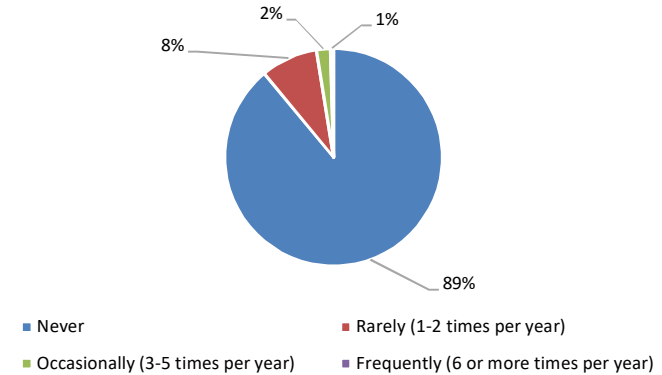
Usage: Lithium ion battery collection (drop off at H-MRF in Valhalla)



Usage: Boat wrap recycling



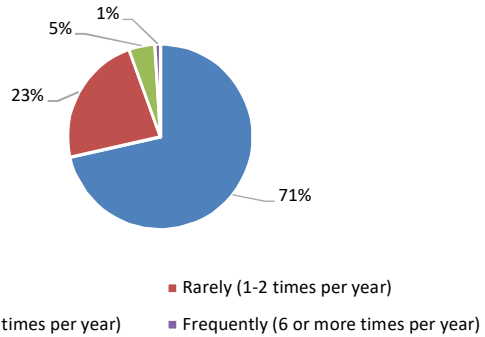
Usage: Recycling HelpLine (informational tool)



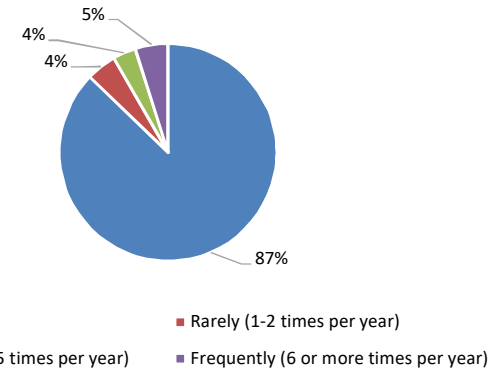
## Westchester County Residential Waste Reduction and Recycling Survey

3. How often do you use the previously listed recycling services (other than curbside recycling)?

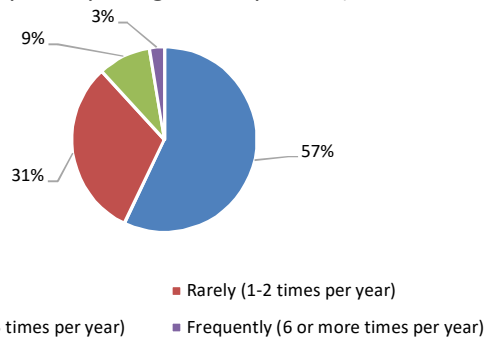
Usage: Electronic waste (e-waste) recycling (drop off at H-MRF in Valhalla)



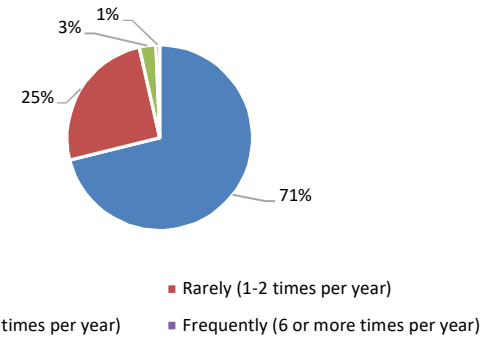
Usage: Recycle Coach App (informational tool)



Usage: Electronic waste (e-waste) recycling (drop off at participating municipalities)

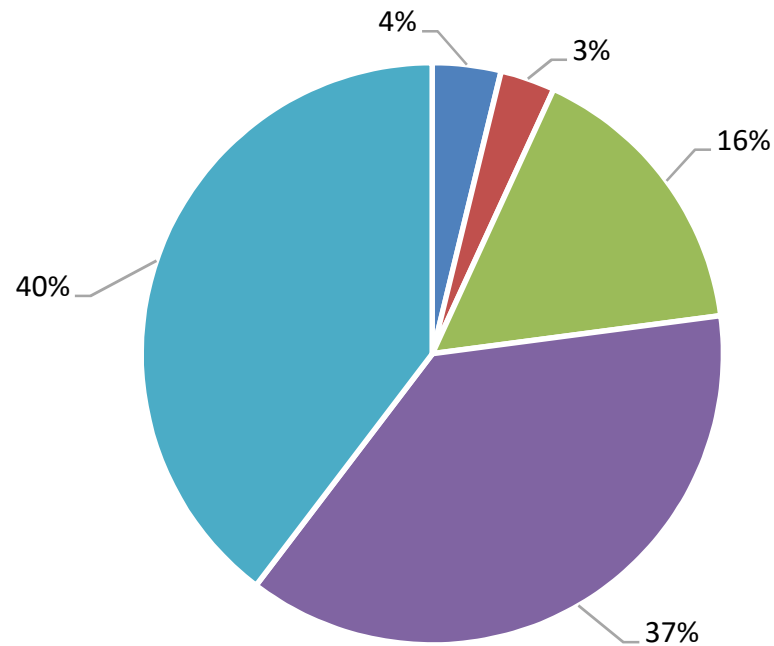


Usage: Paint recycling collection (drop off at H-MRF in Valhalla)



## Westchester County Residential Waste Reduction and Recycling Survey

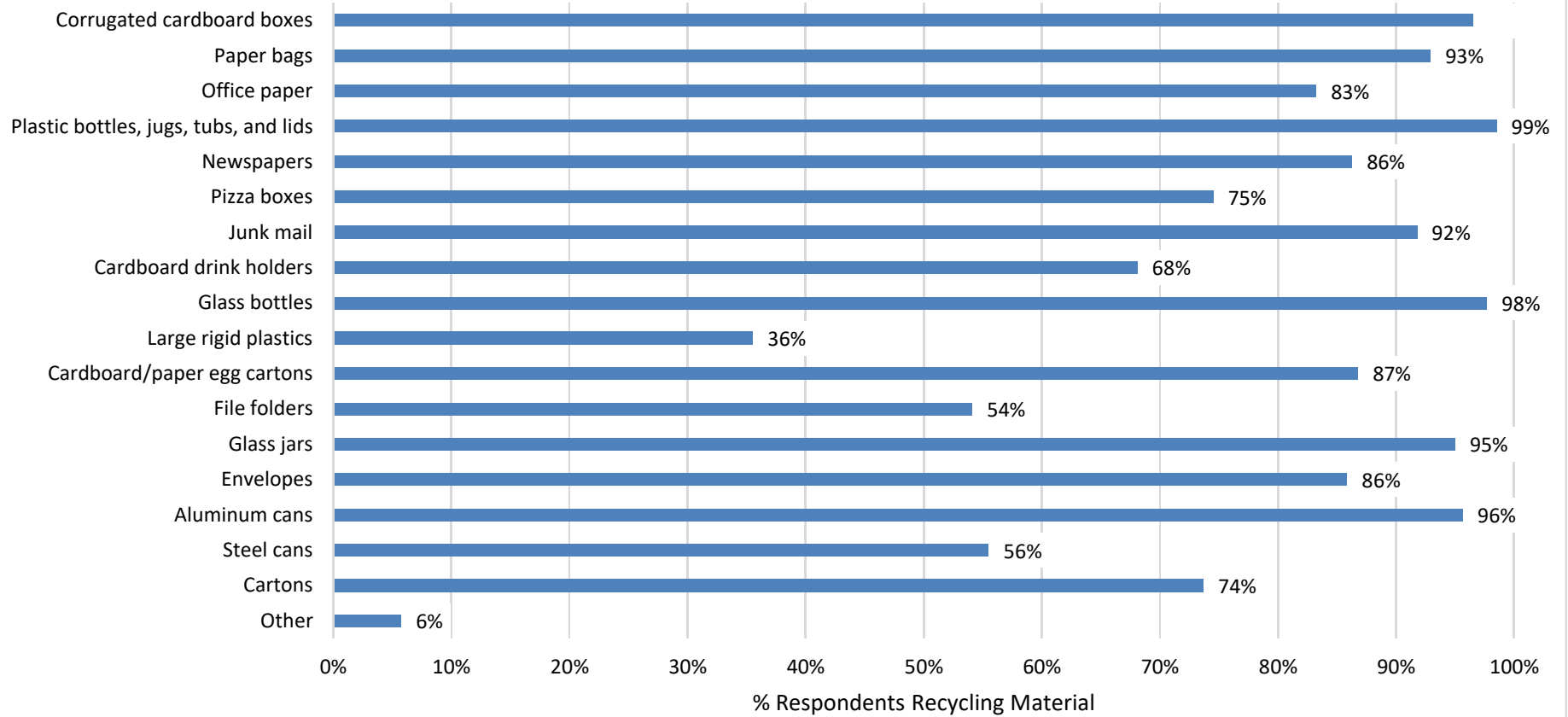
4. How would you rate the overall experience of the recycling services you have used?



■ N/A - I have not used any of the services ■ Somewhat Negative ■ Neutral ■ Somewhat Positive ■ Very Positive

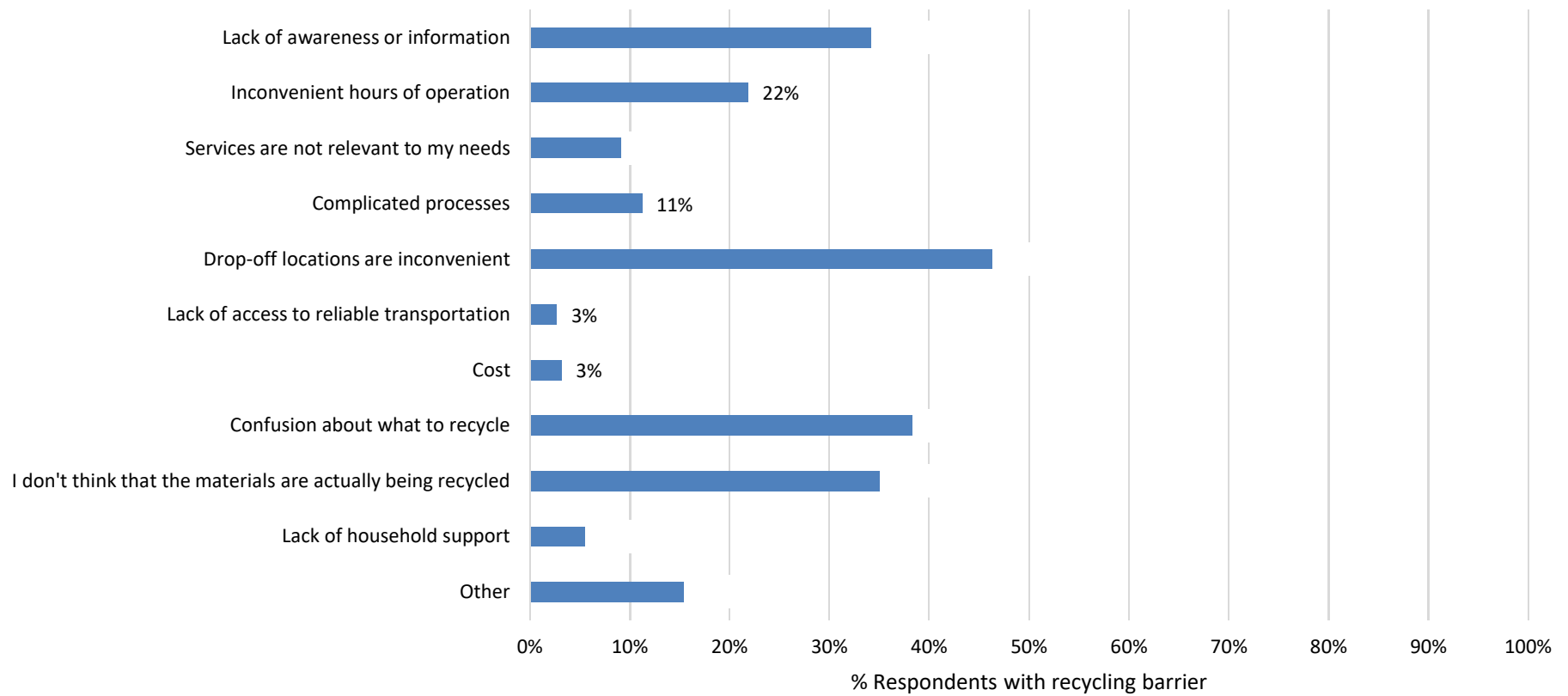
# Westchester County Residential Waste Reduction and Recycling Survey

## 5. What items do you put in your recycling bin? (Select all that apply)



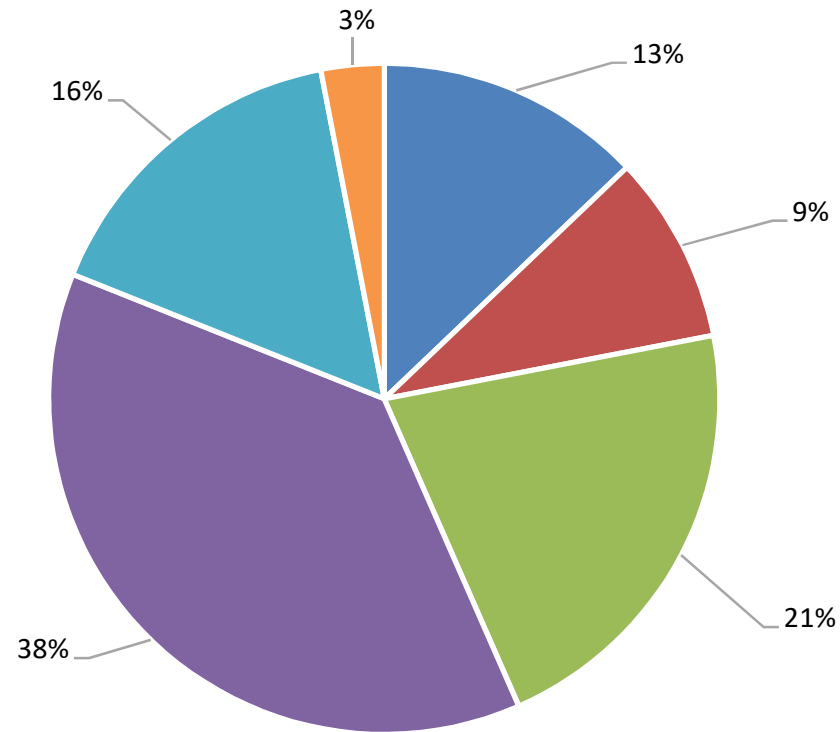
## Westchester County Residential Waste Reduction and Recycling Survey

### 6. What, if anything, prevents you from recycling? (Select all that apply)



## Westchester County Residential Waste Reduction and Recycling Survey

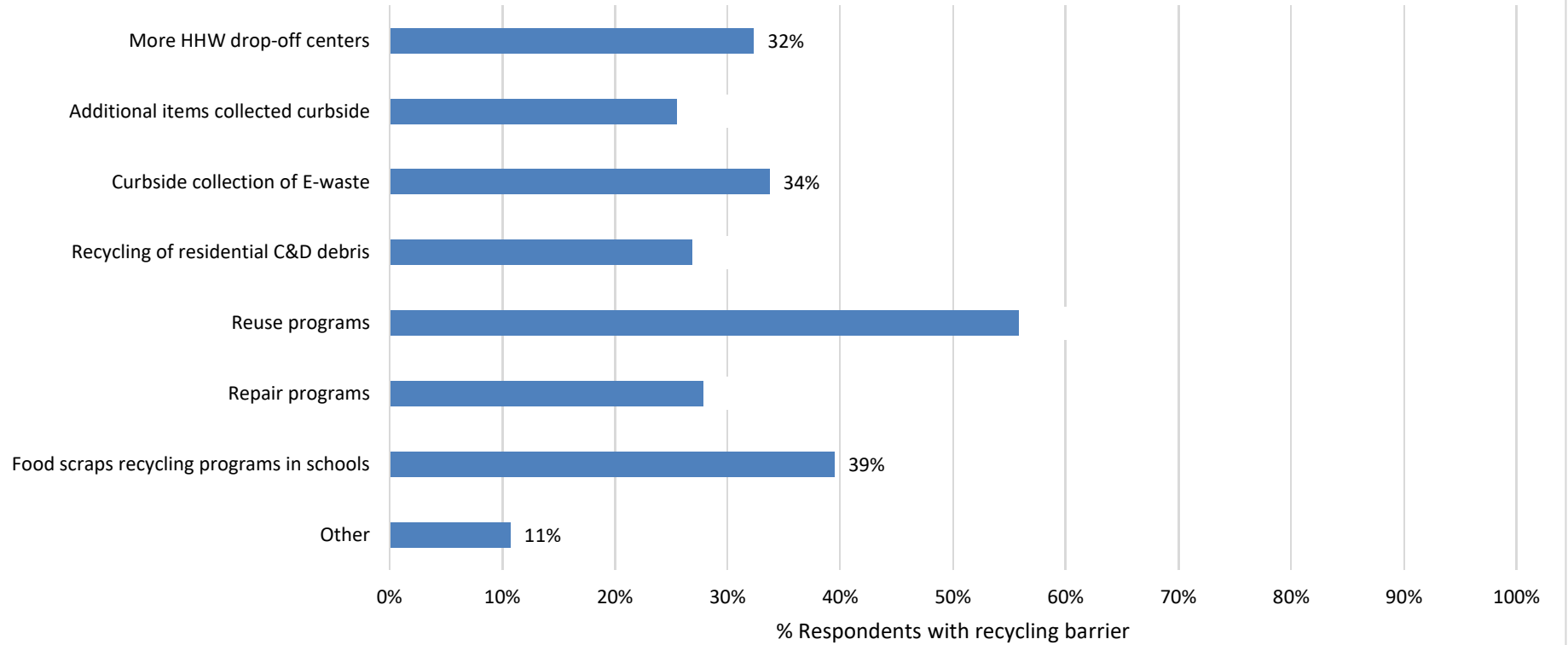
### 7. How Effectively does Westchester County DEF promote waste reduction and recycling to Residents?



■ I Don't Know ■ Not at all Effective ■ Not so Effective ■ Somewhat Effective ■ Very Effective ■ Extremely Effective

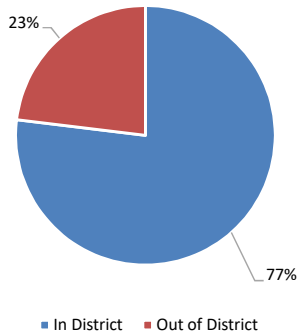
## Westchester County Residential Waste Reduction and Recycling Survey

### 8. What waste diversion and recycling services or sustainability programs would you like to see offered in the future? (Select up to three)

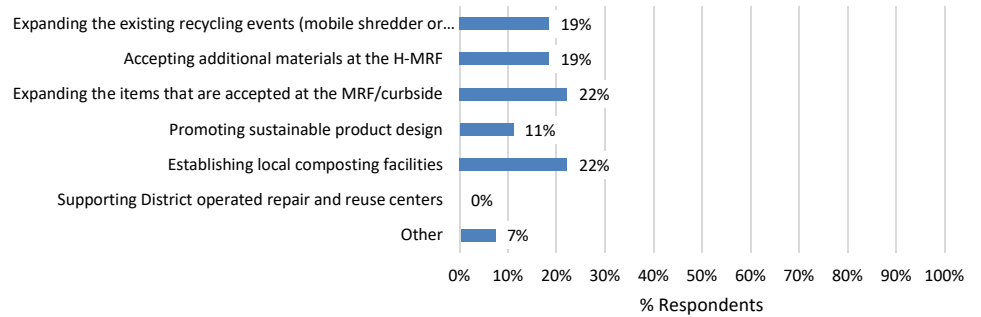


# Westchester County Municipal Waste Reduction and Recycling Survey Results

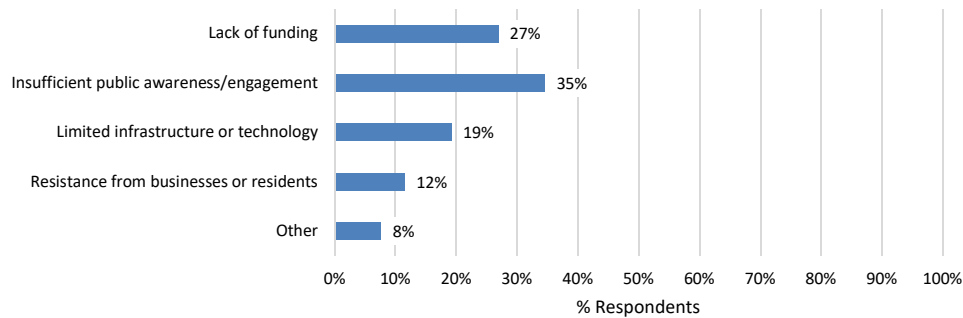
Is your municipality In District or Out of District?



1. Which of the following circular economy initiatives do you think would benefit the County the most?



2. Select the primary barrier to implementing circular economy practices at the Municipal-County level.

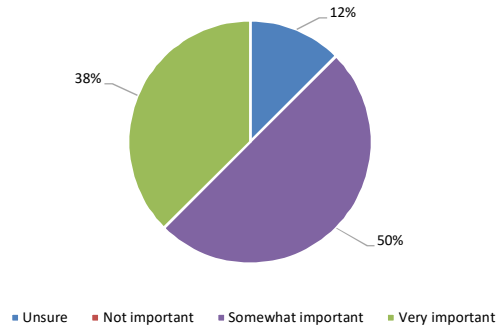


Question 1 Follow-up: Specification for "Other" Response
Collection/disposal of Commercial food scraps
Accepting FOOD SCRAPS at the H-MRF

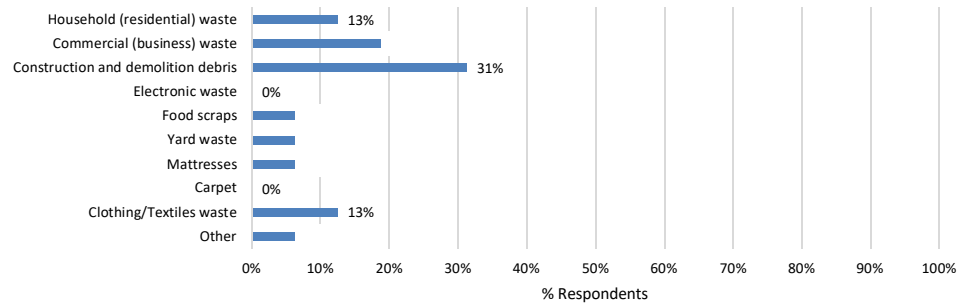
Question 2 Follow-up: Specification for "Other" Response
Cost to provide the services (manpower)
We are out of district but have our own programs. Cost of entry was too high originally.

## Westchester County Municipal Waste Reduction and Recycling Survey Results

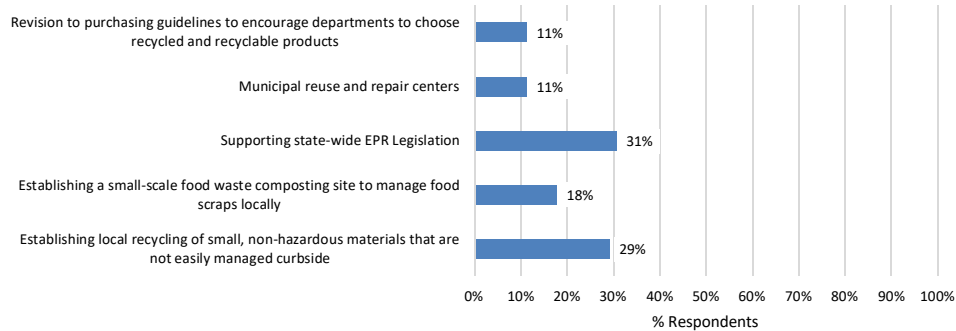
3. How important is it for the County to reduce waste and transition to a circular economy?



4. What waste stream do you believe the County should address or expand upon to make the most impact in terms of waste reduction and/or recycling?  
(Select one)



5. Choose three circular economy activities you believe could be successfully implemented in your municipality. (Select up to three)



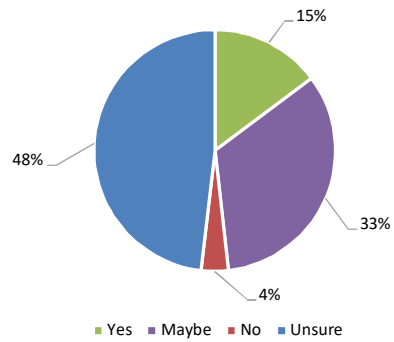
**Question 4 Follow-up: Specification for "Other" Response**

Styrofoam recycling

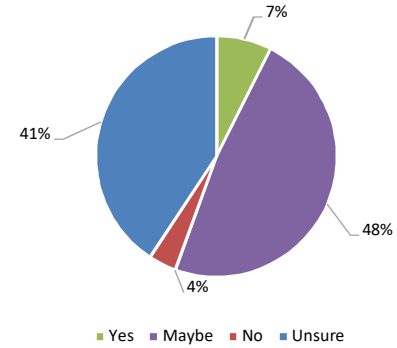
I think you have everything covered. It would be nice to allow out of distsrict municipalities to use some of your services specifically getting rid of flourescent light bulbs.

## Westchester County Municipal Waste Reduction and Recycling Survey Results

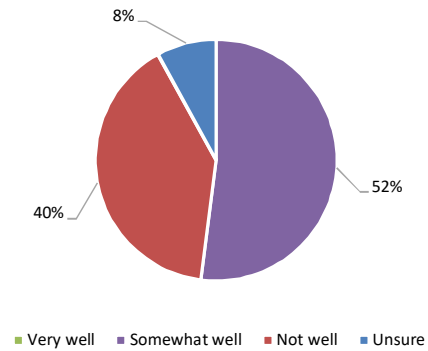
6. Is your municipality willing to financially invest in circular economy infrastructure if it leads to long-term savings?



7. Is your municipality willing to financially invest in circular economy infrastructure if it leads to long-term environmental sustainability?

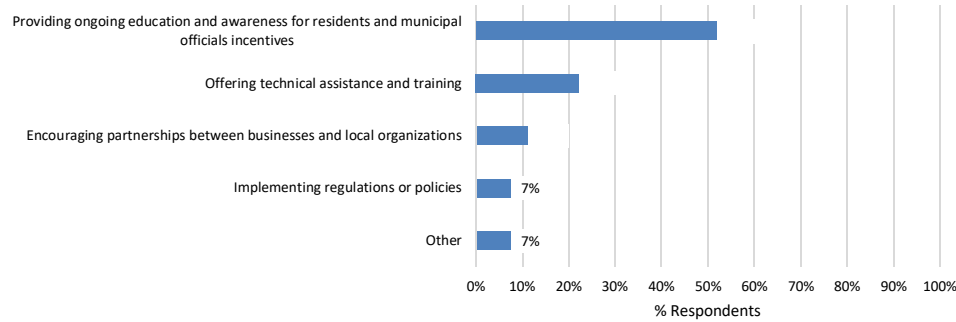


8. How well do you think your municipality's residents understand the principles of the circular economy and waste reduction?



## Westchester County Municipal Waste Reduction and Recycling Survey Results

9. What is the most important role Westchester County government should play in promoting circular economy and sustainability practices?

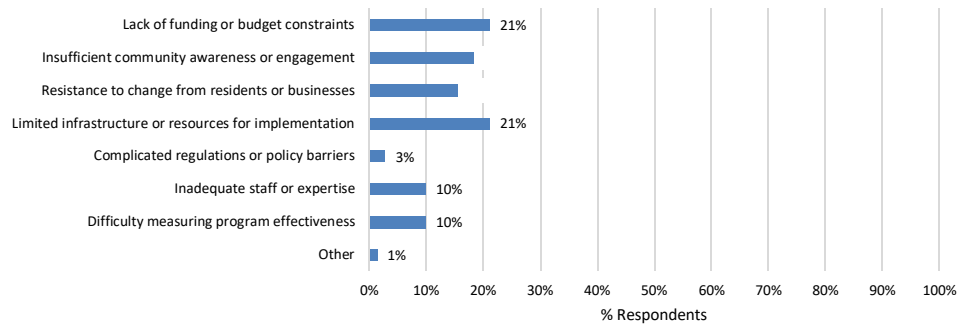


### Question 9 Follow-up: Specification for "Other" Response

The county has the ability to use the district to bond at low cost for larger initiatives that require capital investments as well as land.

Provide contractual and logistical support for hard to recycle items. As an example FL light bulbs are hard to recycle and we could collect a thousand easily. Allowing us to bring 1000 to the MRF at a time would be helpful as an example.

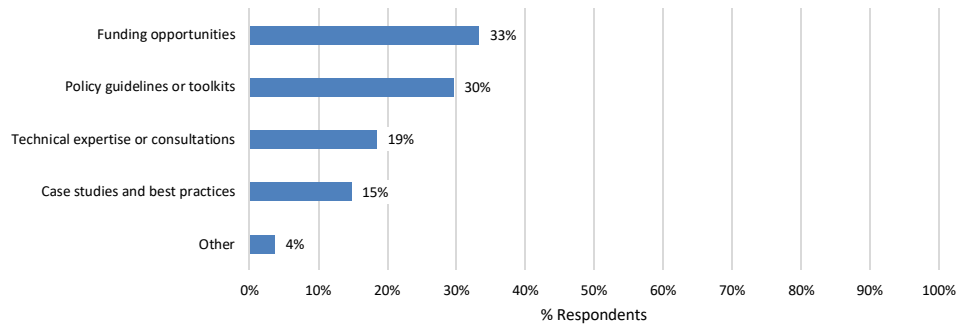
10. Select the three biggest challenges your municipality faces when introducing new waste reduction or sustainability programs?



### Question 10 Follow-up: Specification for "Other" Response

Difficulty finding vendors to support the recycling efforts at any reasonable price.

11. What resource would be the most helpful to integrate circular economy practices into your operations?

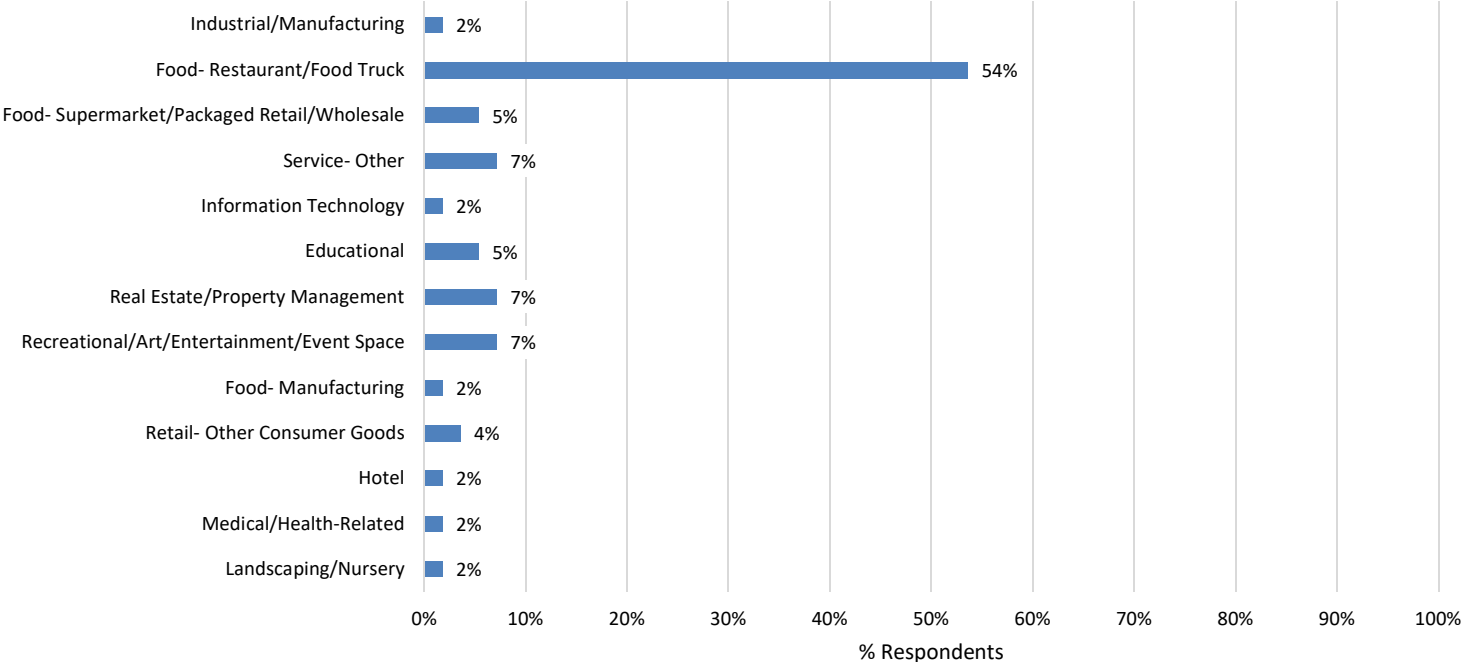


### Question 11 Follow-up: Specification for "Other" Response

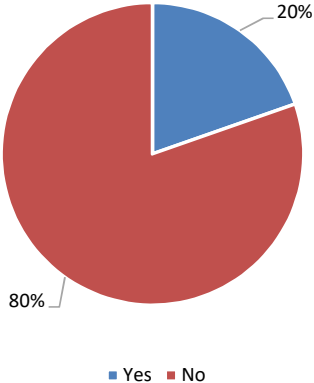
Collection programs for hard to recycle, but critical items like refrigerants.

# Westchester County Commercial Waste Reduction and Recycling Survey Results

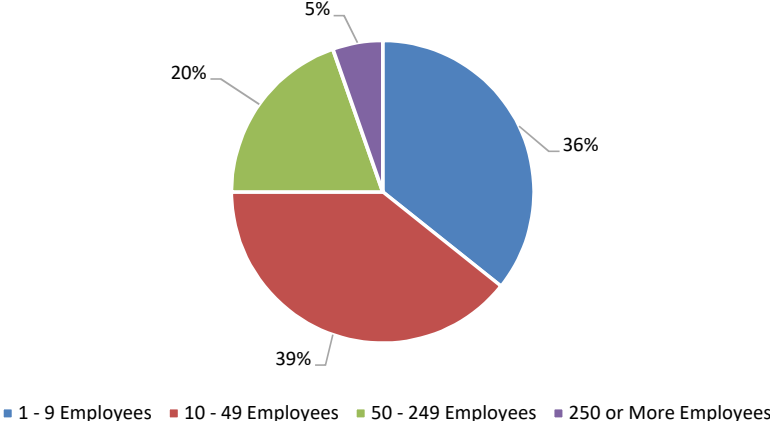
## What type of business do you own, operate, or work in?



## Is your business part of a chain?

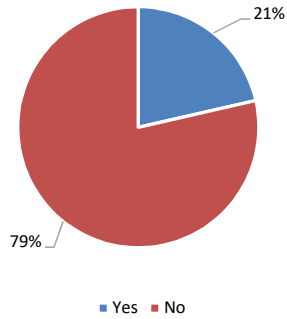


## How many employees does your business have?

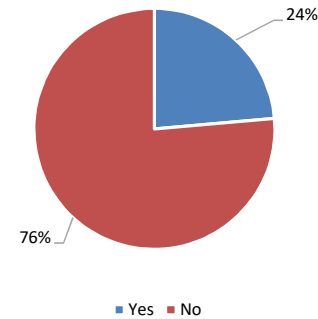


## Westchester County Commercial Waste Reduction and Recycling Survey Results

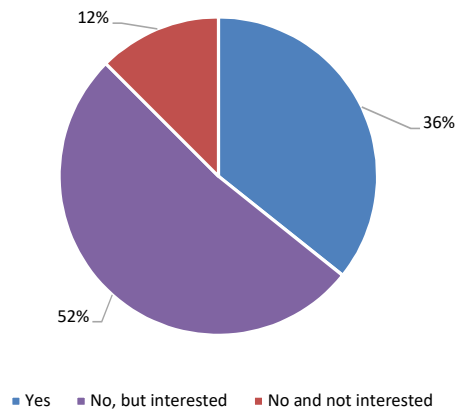
1. Does your business sell a product that could be reused or refurbished if facilities existed?



2. Do you engage in reuse or refurbishing services currently?



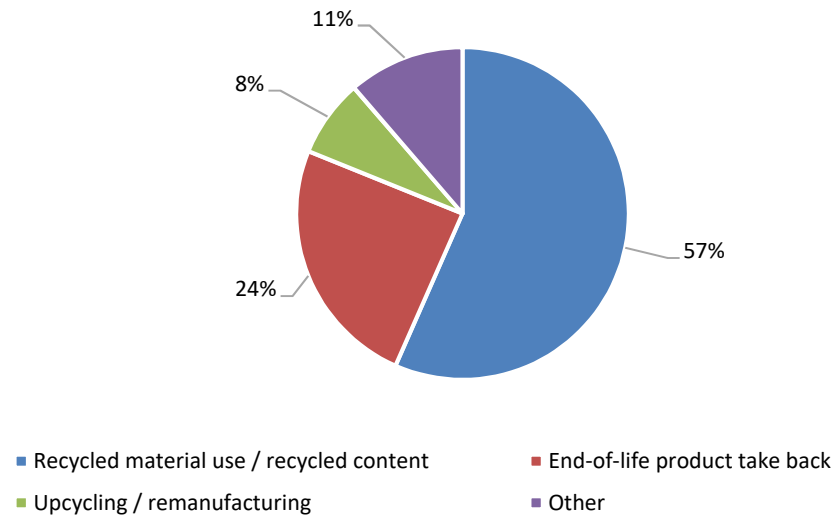
3. Do you currently engage in any partnerships or collaborations aimed at reducing waste or promoting circularity?



Question 3 Follow-up: Specification for "Yes" Response
We give our coffee grind waste to the local church for compost.
My business is a leading contributor to a local Take It or Leave It reuse facility
We have built mobile apps to improve recycling engagement and quality. We've participated in pilot collaborations with Walmart outside NY.
Our fryer oil gets recycled
grease recycling, plastic and card board recycling
compostables and recycling pickup
We used to share coffee grinds for compost with our local church
Our waste oil is collected, picked up, and resused
Work with a composting company
Cooking oil
Attempt to recycle food, donate leftovers to a dinner program in mount vernon
We Compost Reusable cups.
Separate waste materials, plastic and cardboard from other
Oil recycling
Our used furnishing is given to Red Door and Dutchess County Habitat for Humanity
Composting
Composting program, sustainability coordination.
Composting, water bottle fillers on site, sustainable packaging, etc

## Westchester County Commercial Waste Reduction and Recycling Survey Results

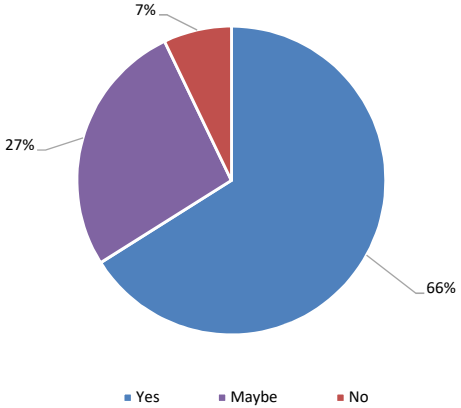
4. Which circular economy model would you be most willing to explore?



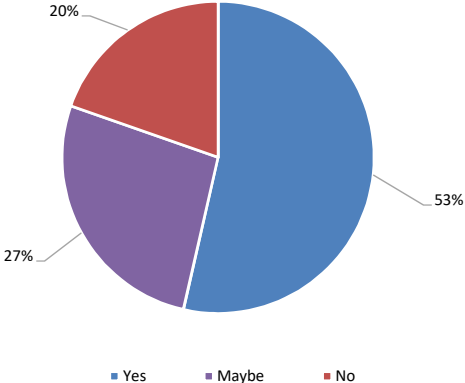
<b>Other (Please Specify)</b>
Repair and reuse model
composting and reusable takeout containers
need more info
Biodiesel
We are moving away from paper and plastics as much as possible

**Westchester County Commercial Waste Reduction and Recycling Survey Results**

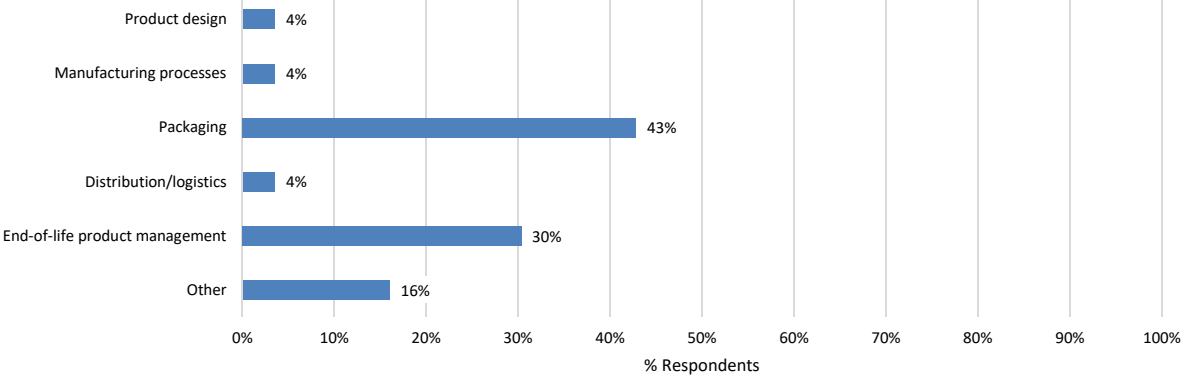
5. Would your business be open to adopting more sustainable packaging solutions if they were more cost-competitive?



6. Is your business open to implementing a food scraps recycling program?



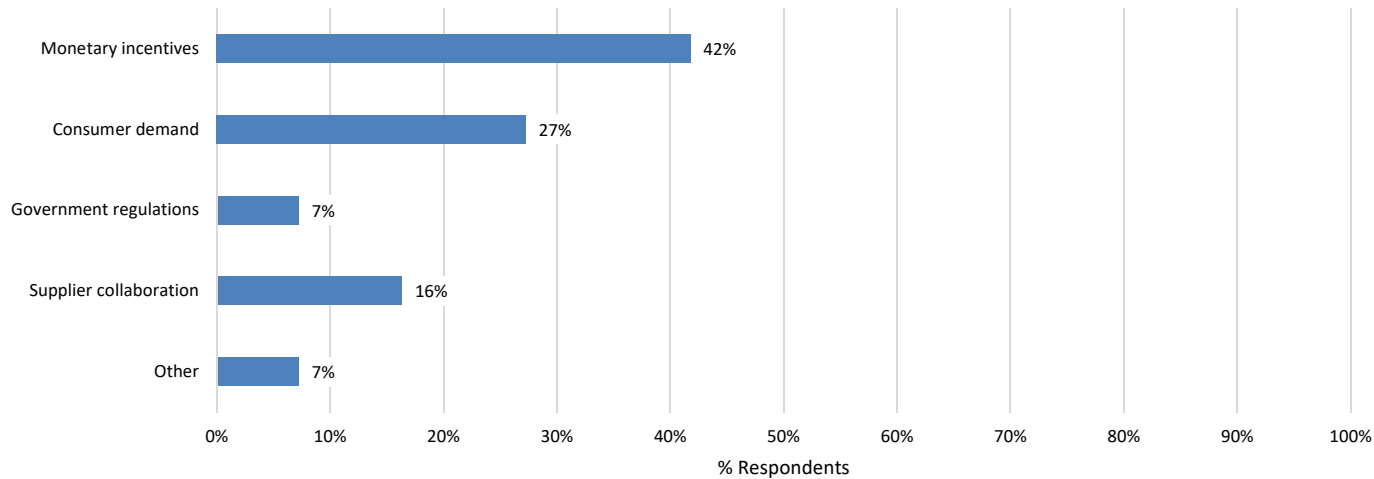
7. Which area of your operations do you believe have the most potential for waste reduction?



Question 7 Follow-up: Specification for "Other" Response
We only have office waste
Nosotros no desperdiciamos comida sólo los restos de los clientes que no consumen
need more info
We are a yacht club not sure any of these apply. We reuse lumber, give away leftover food, recycle batteries, oil at the marina.
Composting recycling reusable
recycle
Use what you consume
organic waste for composting

## Westchester County Commercial Waste Reduction and Recycling Survey Results

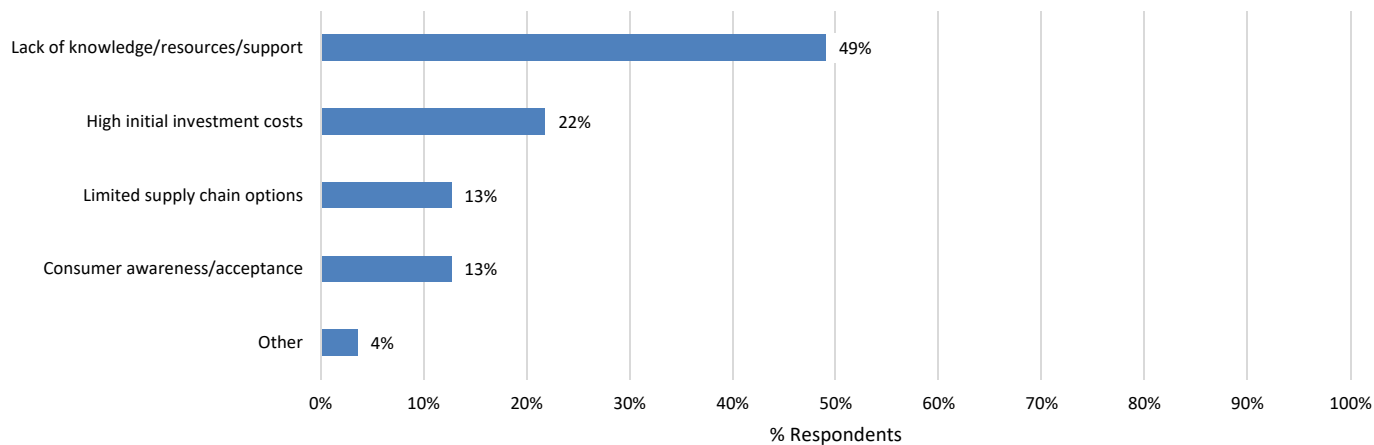
### 8. What initiative would most motivate your business to adopt circular economy practices?



#### Question 8 Follow-up: Specification for "Other" Response

garbage collection costs  
sustainability and ease of use  
Ease and cost.

### 9. Select the biggest challenge you face in implementing circular economy principles in your business?

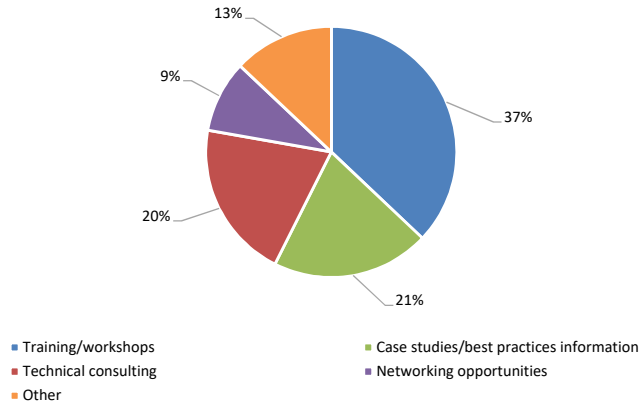


#### Question 9 Follow-up: Specification for "Other" Response

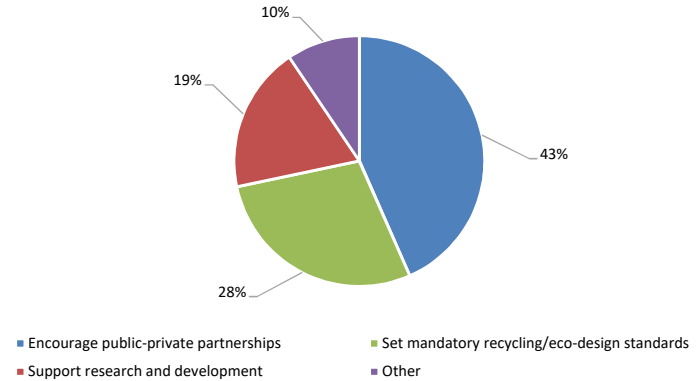
need a service to collect compost and one to service reusable takeout containers

## Westchester County Commercial Waste Reduction and Recycling Survey Results

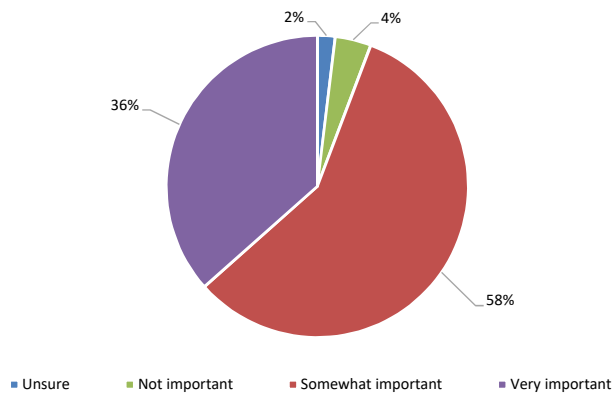
10. What resources would be the most helpful to integrate circular economy practices into your operations?



11. What is the most important role Westchester County government should play in promoting circular economy and sustainability practices?



12. How important is waste reduction to your company's mission?



Question 10 Follow-up: Specification for "Other" Response
County support with product end-of-life processing
EPR Regulations. Put all businesses on a level playing field to mandate circularity.
make it available and we will do it.
need more info
If the Village would pick up compostable waste for commercial properties

Question 11 Follow-up: Specification for "Other" Response
provide food scrap collection
getting ore info out to us
Provide education
Mandate but supply funding for municipalities to pick up.

**APPENDIX C**  
**School Food Scraps Program Interest Survey Memo**

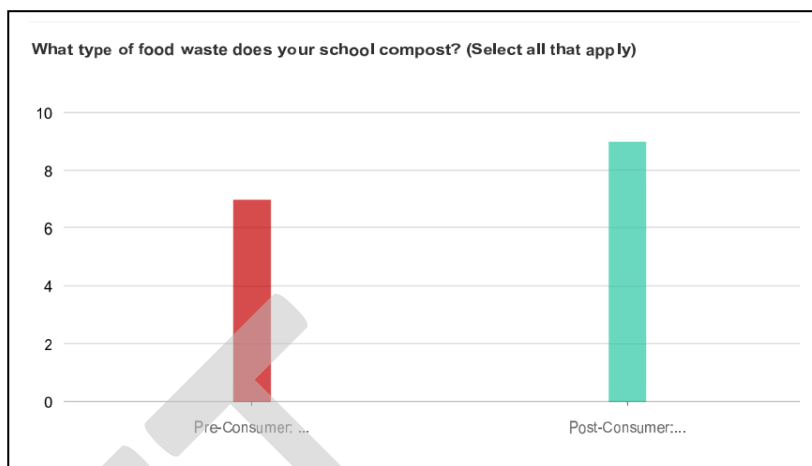
## Westchester County Waste Reduction Study School Composting Survey Results

A recent survey was distributed across school districts in Westchester County, which gathered valuable insights into the various food scraps programs that are happening in the schools at present, highlighting current practices, challenges, and future interests in food waste management within the schools. The survey consisted of 16 total questions that ranged from general information about the schools, to the specific details of their current composting programs and food waste practices, including the funding sources, challenges, and any future plans. The survey was open for one month in the spring of 2025, and representatives from 18 total school districts participated, as indicated by the responses. In particular, the following specific districts responded to the survey:

Name of School:
Tuckahoe UFSD
Tarrytown UFSD
Somers CSD
Scarsdale UFSD
Rye Neck UFSD
Pleasantville Union Free School District
Mt. Pleasant CSD
Mamaroneck UFSD
Katonah-Lewisboro School District
Irvington UFSD
Hastings on Hudson UFSD
Greenburgh CSD
GNC UFSD
Edgemont
Croton-Harmon UFSD
City School District of New Rochelle
Chappaqua Central School District
Blind Brook UFSD

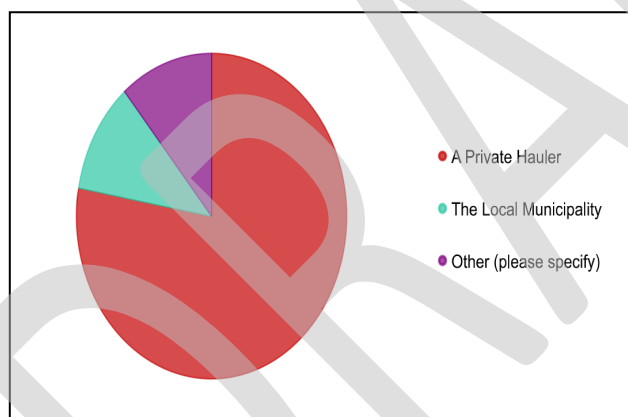
### **Key Findings:**

1. Participation in Food Recovery and Composting Initiatives:
  - a. 55% of schools utilize share tables, encouraging students to redistribute unopened food items.
  - b. 55% of respondents reported that their schools have active cafeteria food scraps composting programs.
    - i. Of these schools, 50% compost post-consumer food scraps and 38% compost pre-consumer kitchen waste.



## 2. Composting Approaches:

- a. 90% of schools engaging in composting use off-site composting that is facilitated by private haulers or municipalities.
- b. Notable private haulers included Suburban Carting Co. (27%) and CRP Sanitation (11%).



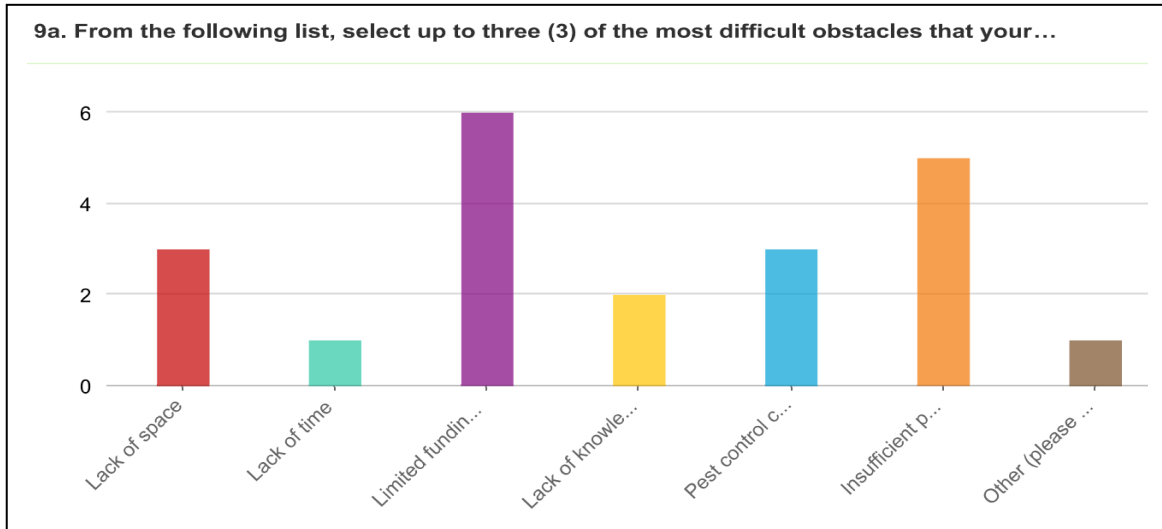
## 3. Volume and Cost Management:

- a. Schools reported capturing an average of 1,269.5 pounds of food waste annually (Sum: 10,156 pounds across the respondents).
- b. Funding for composting was primarily sourced from existing school budgets (44%), supplemented by grants and partnerships (22%).

## 4. Monitoring and Support:

- a. 27% of schools ensure the food scrap disposal is monitored, yet participation levels vary.
- b. Staffing and volunteer accommodation to support food waste programs remains a challenge, with mixed responses regarding feasibility.

5. Challenges and Barriers:



- a. Limited funding (33%) and insufficient participation or support (27%) are the primary obstacles faced.
- b. Pest control concerns and lack of space further impact program effectiveness.

6. Interest and Preferences for Future Programs:

- a. 22% of schools are somewhat interested in expanding cafeteria food scraps composting, while 11% are very interested.
- b. Preferences lean towards off-site composting for all food waste (16%).

Based on the survey findings, collaboration will be critical to enhancing the success and long-term sustainability of food scraps composting programs in Westchester schools. Partnerships with local environmental organizations, farms, municipalities, and/or composting facilities would benefit the schools, as would inter-district collaborations to create a network for experience-sharing and joint problem-solving.

Moving forward, educational campaigns and training should be an ongoing priority. The County could support this effort by developing easy-to-use guides or infographics for schools to address knowledge gaps and encourage proper sorting of cafeteria food scraps.

**Addressing Barriers:**

- Limited Funding / Cost of Program – Develop partnerships with local businesses or municipalities to share program costs. Create a cost-benefit analysis to demonstrate long-term savings from reduced waste disposal fees, as applicable. Potentially secure grant funding from government programs, environmental organizations, or corporate sponsors.

- Insufficient Participation – Organize regular training for staff, volunteers, and/or students to encourage active participation. Appoint “compost champions” (students or staff) to promote and monitor participation levels. Implement an awareness campaign within schools to highlight the value of composting.
- Pest Control Concerns – Schedule frequent collections to minimize onsite food scrap storage duration. Train staff and students on best practices to reduce contamination. Use pest-proof compost bins or containers to prevent infestations.
- Lack of Space – Prioritize off-site composting with private haulers or local municipalities to eliminate the need for composting on school grounds. Explore compact composting technologies suitable for limited spaces. Coordinate with neighboring schools or community centers to share facilities.
- Lack of Knowledge or Expertise – Develop composting tutorials tailored for school audiences. Host workshops and seminars to educate stakeholders on effective composting practices.
- Lack of Time – Simplify the process by using labeled bins and clear signage for sorting food scraps. Integrate composting tasks into existing school activities.

Further discussions should be had with the interested schools to align their capabilities and interests with scalable solutions. In the meantime, some preliminary recommendations to the County, based on the survey results, can be made as follows:

- Explore avenues for additional funding and partnerships to alleviate budget constraints and ensure program sustainability.
- Provide training and resources to address pest control concerns and enhance knowledge about food scraps disposal processes and benefits.
- Develop strategies to increase participation and staff or volunteer engagement in monitoring the cafeteria programs.
- Tailor composting solutions to schools’ preferences, emphasizing off-site composting to maximize efficiency.

The survey results provide a brief overview of the current state of food scraps programs in Westchester schools, highlighting both successes and areas for growth. With a significant proportion of schools actively participating in waste reduction and composting initiatives at present, there is clear potential to expand and enhance these efforts. Addressing challenges such as funding constraints, participation gaps, pest control concerns, and logistical barriers will be pivotal in fostering effective and lasting practices across all schools. By implementing tailored solutions and leveraging community partnerships, schools can overcome these obstacles, furthering their commitment to environmental stewardship. This feedback serves as a component of strategic planning, ensuring that future programs align with the diverse needs of the schools while contributing to the County’s broader waste diversion and sustainability goals.

*The experience to*  
**listen**  
*The power to*  
**solve**<sup>SM</sup>

**Barton**  
**&Loguidice**

[www.bartonandloguidice.com](http://www.bartonandloguidice.com)