State of Delaware Assessment of Municipal Solid Waste Recycling, Calendar Year 2025 Final Report

Prepared for:

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PREFACE

In September of 2000, with Executive Order No. 82, former Delaware Governor Thomas R. Carper established the Delaware Recycling Public Advisory Council (RPAC) and delegated it with advising and assisting the Department of Natural Resources and Environmental Control (DNREC) and the Delaware Solid Waste Authority (DSWA) in achieving waste recycling goals. In 2010, the Delaware General Assembly (7 Del. Code, §6058) reformed RPAC and established requirements for universal recycling access and mandatory reporting on recycling activity in Delaware to help track progress.

RPAC established the Subcommittee on Measurement and Reporting (M&R Subcommittee)[1] to measure recycling and track progress in the State. The Subcommittee, with representation from DNREC, DSWA, and RPAC, developed clear definitions on recycling activity, differentiating between materials classified as municipal solid waste (MSW) (following the United States Environmental Protection Agency [EPA] definition) and all other solid waste materials managed, whether they are recycled, diverted, or disposed.

DSM Environmental Services, Inc. (DSM) first surveyed and reported on recycling and diversion activity in Delaware for DSWA in 2005 (*State of Delaware Assessment of Commercial and Industrial Recycling Activity*), attempting to quantify all types of non-hazardous waste materials being recycled or recovered for beneficial use in Delaware from all sources. The original 2005 study entailed on-the-ground surveys of most large generators and processors of recyclable material in Delaware and focused on materials recovery from the commercial and industrial sector; relying on data provided by DSWA with respect to quantities of residential recyclables dropped off at DSWA facilities.

In Calendar Year (CY) 2007, DSM was first contracted by RPAC to complete the *State of Delaware Assessment of MSW Recycling* (MSW Recycling Survey) and report on the annual state of recycling in Delaware, concentrating on those materials included in the EPA's definition of MSW (see Appendix A). However, reporting did not become mandatory until CY 2011. DSM relies on the database originally developed in 2005, updated using the internet, e-mail, and telephone calls to identify new organizations involved in recycling and removing organizations no longer operating in Delaware.

This CY 2025 MSW Recycling Survey represents the eighteenth annual survey prepared by DSM for RPAC. Using detailed data on disposal provided by DSWA, it calculates the Delaware MSW Recycling Rate and estimates a separate recycling rate for the residential and commercial sectors for CY 2025.

[1] The subcommittee was originally named "Measurement and Methodology" and is referred to as the M&M subcommittee in past reports.

ACRONYMS

A few of the acronyms used throughout this report are:

C&D = Construction and Demolition (Waste)

CY = Calendar Year beginning January 1 and ending December 31

DNREC = State of Delaware, Department of Natural Resources and Environmental Control

DSM = DSM Environmental Services, Inc.

DSWA = Delaware Solid Waste Authority

EPA = Environmental Protection Agency

ICI = Industrial, Commercial & Institutional Waste

M&R = Measurement and Reporting (Subcommittee of RPAC)

MSW = Municipal Solid Waste

RCRA = Resource Conservation and Recovery Act

RPAC = Recycling Public Advisory Council

TSW = Total Solid Waste

INTRODUCTION

DSM Environmental Services, Inc. (DSM) was contracted to complete the *State of Delaware Assessment of MSW Recycling* for CY 2025. Consistent with previous years, DSM attempted to identify new potential reporters as well as remove entities that no longer fall under the reporting requirement.

The methodology used to calculate the CY 2025 recycling rate, limitations encountered, and the data collected and analyzed are presented below following the format of previous reports.

Disposal Estimates

Allocations of MSW disposal must be made to calculate residential and commercial recycling rates. To develop the allocations, disposal data are provided by DSWA for CY 2025 from all six DSWA facility scale houses. Incoming vehicle data and annual weights by vehicle type at each of the six DSWA facilities are then allocated by DSM based on waste classification(s) per vehicle type using the most recent waste composition study (2015/2016).[2] These data are then aggregated to estimate the total residential, commercial, and C&D waste deliveries made to DSWA facilities in CY 2025.[3]

Material Categories

This assessment covers all materials identified by the EPA as MSW and defined in the EPA document,

Measuring Recycling, A Guide for State and Local Governments (September 1997) as:

> *"Wastes such as durable goods, nondurable goods, containers and packaging, food scraps, yard trimmings, and miscellaneous inorganic wastes from residential, commercial, institutional, and industrial sources such as appliances, automobile tires, old newspapers, clothing, disposable tableware, office and classroom paper, wood pallets and cafeteria wastes."* MSW *"excludes solid waste from other sources, such as construction and demolition debris, auto bodies, municipal sludge, combustion ash, and industrial process wastes that might also be disposed of in MSW landfills or incinerators. (US EPA1996b)"*

The EPA guidance document further defines what is and what is not MSW (Table A, Appendix A of this report), and what does and does not count as MSW recycling (Table B, Appendix A). While the EPA guidance document helps delineate what materials to include in the measurement of MSW recycling, it is often the case that reporters generate, collect, and/or process some materials that are not included in the EPA's definition of MSW recycling.

DSM's approach for the CY 2025 assessment has remained consistent with previous years in surveying and reporting on residential, commercial, and industrial activities that would be expected to generate and recycle materials that fall under the EPA's definition of MSW and recycling (as shown in Table 1 found at the end of this section).

In some instances, DSM requested surveys from reporters who generate, collect, or process both

[2] DSM is currently conducting a new waste characterization study, which will result in new allocations in 2025.
[3] C&D wastes accepted at DSWA facilities are accounted for and then excluded from the MSW Recycling Rate.

included and excluded materials. In these cases, the reporter is only asked to report on materials included in this survey. For example, DSM asks green waste companies to report on leaf and yard waste, trees and branches, and clean wood, but exclude any land clearing debris that may be processed at their facilities as land clearing debris do not meet the EPA's definition of MSW.

Table 1, below, lists the material types consistent with the way EPA reports materials recycling. Column 2 of Table 1 provides a detailed description of what generally falls under the material type. Column 3 then identifies the primary generator of the material, either residential or commercial, and Column 4 details the typical reporting group per each material type.

Excluded and Included Material Types

As presented in Table 1, this report only includes materials recycled from MSW. All other materials, such as construction and demolition waste and industrial process waste are excluded (but are accounted for in the *Total Solid Waste Survey* completed on an every 5-year basis, most recently in 2023). Additionally, gaseous and liquid wastes, infectious wastes, and Resource Conservation and Recovery Act (RCRA) Sub-title C hazardous wastes are excluded.

As presented in Table 1, most metals (except for appliances/white goods, lead-acid batteries, and aluminum cans) are not counted towards MSW recycling. This approach results in a slightly lower recycling rate than if scrap metals (often collected by the same reporters), were also counted toward the MSW recycling rate.

It is important to note that this report relies on the haulers, brokers, and processors' discretion as to the source of materials reported. For example, if cardboard is reported by a generator, hauler, or processor that reports on MSW recycling (and not on other C&D wastes), it would be included in the MSW recycling totals even if it may have come from a construction site. However, if cardboard is reported as going to a C&D recycling facility, or by a construction contractor, it would be excluded.

Potential for Use as Energy Recovery

Materials that were reported as recycled but directly sent (or processed and sent) for energy recovery are excluded. For example, tires sent for tire-derived fuel are not included in recycling or disposal tons to the degree that this end-use can be identified. Oil recycling is also not included because most waste oil is recovered for use as fuel and not re-refined.

Potential for Off-Site Disposal

Consistent with EPA guidelines, only those materials which *would be* disposed of off-site if they were not beneficially reused or recycled, and therefore could potentially be delivered to a Delaware landfill, are included in the assessment of recycling activity. For example, wood chips and branches that are disposed of on-site are excluded while branches and wood chips removed from a site are included. However, wood waste that would be disposed of with other C&D waste is excluded in cases where DSM could confirm that this was the case. Note that, consistent with the EPA methodology, DSM asks reporters to exclude all *land clearing debris* from their MSW recycling survey report even if has been managed off-site.

Import and Export

This assessment only includes materials that are generated in Delaware and does not include materials generated outside of Delaware even if they are imported into the State for recycling or beneficial reuse. This report does attempt to include all recyclables generated within Delaware but exported out-of-state for recycling.

In some instances, however, accounting for all exported recyclables is not always possible because it is unclear if out-of-state processors are subject to Delaware's reporting requirement, making it incumbent upon DSM or the processor to identify and survey all small generators located in Delaware to account for these small material flows.

For example, a grocery or retail chain may backhaul materials such as retail bags and shrink wrap/film to a centralized distribution facility outside of Delaware where they are consolidated before sending to processors. In these cases, processors may only be able to identify the origin of materials as the distribution facility (outside of Delaware), and the load weights of the consolidated materials from an undisclosed number of store locations. In these cases, it is common for the original generator (grocery or retail chain) to submit a report for all of the Delaware store locations using an estimated average weight by material type for each store.

Mixed Recyclables

One of the largest categories reported is "mixed recyclables" which are the commingled (primarily residential) recyclables collected by haulers from households and delivered to Material Recovery Facilities (MRFs). The Republic MRF (ReCommunity, LLC) at the Delaware Recycling Center accepts the majority of commingled material generated in Delaware, but not all of it.[4] This material is not reported by individual material type because it is delivered commingled (corrugated, mixed paper, newspaper, glass, metal, and plastic containers) and separated at the MRF together with commingled material delivered from some non-Delaware sources. However, for the Republic MRF, DSWA maintains accurate records of the commingled quantities delivered from Delaware households and businesses, and these commingled recyclables from Delaware sources are included in this report.

Note, for example, that in Table 1 the Paper and Paper Packaging category reports the primary generators as commercial, even though most newspaper, and a significant amount of corrugated is generated at the residential level. This is because the residential generation is primarily collected and processed as "mixed recyclables" while the separated material is primarily generated by commercial activities and reported separately.

[4] Commingled recyclables are also commonly referred to as single-stream recyclables.

TABLE 1: MATERIALS INCLUDED IN DELAWARE RECYCLING STUDY, AND GENERATOR CATEGORY

Material Category	Description	Primary Generator	Typical Reporters
Paper, Paper Packaging			
Corrugated (OCC)	Cardboard, baled and sorted	Commercial	Retailers, Grocers, Haulers, Recycling Processors, Brokers
Newspaper (ONP)	Newspaper, including inserts	Commercial	News Distributors, Recycling Processors, Brokers
Sorted Office Paper	Primarily white office paper	Commercial	Document Destruction Businesses, Offices, Banks, Institutions, Brokers
Mixed Paper	Print overruns, junk mail, etc.	Commercial	Recycling Processors, Brokers
Packaging			
Glass	Food and beverage bottles and containers	Commercial	Beverage Distributors, Recycling Processors
Plastic Film / Shrink Wrap	Plastic wrap utilized in the packaging process	Commercial	Retailers, Grocers, Haulers, Recycling Processors,
Retail Bags	Plastic retail bags	Residential	Retailers, Grocers
Plastic Containers	Plastic bottles and containers	Commercial	Manufacturers, Recycling Processors
Polystyrene Packaging	Styrofoam packaging and single use food packaging and cups	Residential	DSWA, Manufacturers
Aluminum Cans	Aluminum beverage cans	Residential	Scrap Metal Recyclers
Mulched Pallets	Pallet wood mulched NOT reused	Commercial	Pallet Recyclers
Mixed Recyclables			
Single Stream, Commingled, or Single-Sort	Cardboard, Paper, Plastic Containers, Aluminum and Steel Cans, and Glass	Residential	Municipalities, Haulers, Offices, Manufacturers, Recycling Processors
Vehicle Waste			
Tires	Used Tires sent for recycling/reuse	Residential	Tire Recyclers
Lead Acid Batteries	Lead Acid Batteries sent for recycling	Residential	Manufacturers, Scrap Metal Recyclers, Universal Waste Processors
Oil Filters	Oil Filters drained and recycled	Residential	Universal Waste Processors
Special Wastes			
Carpet	Carpet used as flooring	Commercial	Haulers
Textiles	Clothing donated for reuse or textile/fabric leftovers	Residential	Non-Profits, Manufacturers
Mattresses	Used Mattresses to be dismantled	Residential	Retailers
Fluorescent Bulbs	Florescent Bulbs containing mercury sent for recycling	Commercial	Universal Waste Processors, Manufacturers, Retailers
Electronic Goods	Computers, Cell Phones, TVs, and all other electronic devices recycled	Residential	Electronic Waste Processors, Retailers, Institutions
Other Batteries	Household or 'other' batteries not including lead acid	Residential	Manufacturers, Universal Waste Processors
Organic Wastes			
Fats, Oil, Grease	Resulting from food preparation	Commercial	Rendering Companies, Institutions, Restaurants
Food Waste	Expired/waste meats, vegetables and pre-made meals	Commercial	Grocers, Rendering Companies
Leaf and Yard Waste	Leaves, grass clippings, branches and shrubs with diameters that do not exceed 4"	Residential	Landscapers, Drop-Off Sites, Haulers
Trees and Branches	Branches greater than 4", blow downs, tree removal	Residential/ Commercial	Landscapers, Tree Companies, Drop-Off Sites
Clean Wood	Not treated, stained, or painted	Commercial	Haulers, Recycling Processors
Metals			
White Goods	Appliances	Residential	Scrap Metal Recyclers, Retailers
Other			
Mixed Plastics	All Other Plastics	Commercial	Retailers, Recycling Processors, Manufacturers

PROJECT APPROACH

Survey Participation

The *State of Delaware Assessment of MSW Recycling Survey* became mandatory in CY 2011. The targeted list of survey participants is updated annually to include only those organizations most likely to generate or handle large quantities of materials that have been diverted from disposal and meet the EPA's guidance on what is included in MSW recycling.

Survey Methodology

The survey approach for this CY 2025 assessment is consistent with the previous year's methodology, and is described in detail below.

First, DSM reviewed and updated the existing recycling contact database. DSM also verified and updated contact information for organizations that report annually with the contact information provided on the previous year's completed survey form or with information provided via e-mail or telephone by the previous year's reporter.

As with previous years, in CY 2025 DSM attempted to identify any new facilities based in or operating in Delaware that fall into the following major categories:

- ***Recycling haulers*** that collect recyclables (commingled, or source-separated), as well as yard waste, tires, clean wood, and other recyclable materials from large and small generators.
- ***Processing facilities, brokers, and end-users*** that either handle, process, or buy recovered fiber, plastics, batteries, oil filters, tires, etc. from Delaware generators.
- ***Large retailers and grocers*** that generate large quantities of cardboard (OCC), shrink wrap/film, pallets, appliances, and/or lead-acid batteries. Organizations falling under this category generally backhaul their recyclables to a central distribution center where they are consolidated and then sent for recycling at regional processing facilities.
- ***Data Management Companies*** *(*such as those working within the health care industry) or ***Large Financial Institutions*** that handle large quantities of confidential paper or electronic records that need to be shredded or otherwise wiped from equipment.
- ***Large employers not listed above, including institutions and manufacturers*** that may generate paper, plastics, metals, or other recyclable materials in sufficient quantities to utilize out-of-state handlers or brokers that may not report.

In all cases, DSM offers survey participants the opportunity for their data to remain confidential. Survey data collected is aggregated by the weight of each material type and no individual company data is reported. However, participating company names and participation status (but not quantities) may be reported to RPAC if requested.

Second, DSM and DNREC wrote letters which DSM sent (along with the survey form) electronically to all organizations in the contact database that had a valid e-mail address. The survey form was also made available for download on DSM's website and reporting guidance was available on the DNREC website.

Initial outreach was done on December 29th, 2025, through direct e-mail to survey participants. The initial e-mail included the introductory letter as well as the report forms (both an electronic version and

a hard copy), a letter from DNREC explaining the reporting requirement, and a letter from DSM explaining how to complete the report form. These e-mails were sent with a read-receipt request, allowing DSM to confirm that participants had received and opened the initial e-mail.

In cases where DSM had no e-mail address, an invalid e-mail address, or no confirmation that the contact had opened the outreach e-mail, DSM made attempts to correct the contact information and/or directly contact the participant to ensure that they had the reporting information. DSM followed up the initial e-mail at least twice to remind participants of the February 16, 2026, deadline and arrange for extensions when necessary. Following the February 16th, 2026, deadline, DSM provided DNREC with a list of non-responders[5].

A copy of the letter from DNREC and DSM and the CY 2025 survey form are all attached as Appendix B and Appendix C of this report.

Third, as completed surveys were submitted, DSM confirmed receipt of the surveys with the reporter via e-mail or phone. DSM then updated the contact database with any new organizations that were listed in the surveys as receiving materials from Delaware generators. DSM also updated the contact database to note any companies that had closed, were deemed not applicable for annual contact, merged, or were no longer operating in the State of Delaware.[6] DSM also updated the database with any new contact names identified during telephone calls or on submitted report forms.

Fourth, DSM attempted to collect the following information from each survey participant (as noted on the survey form found in Appendix C):

- Types of materials handled or recycled;
- Quantities recycled of each material type for CY 2025 (in tons);
- Names of facilities or brokers where materials were sent for processing or end-use in CY 2025 (to ensure double counting did not occur);
- Whether the material was classified as generated by the residential or commercial sector; and,
- Specific end uses of some materials to ensure that uses such as tires for tire-derived fuel and shredded paper to waste-to-energy facilities would be excluded from the recycling totals reported.

While this information is requested on the survey form, in many cases DSM needed to follow up with reporters by telephone or e-mail when incomplete survey forms were submitted. The most common follow-up request was to ask where materials reported were sent, or whether the reported material included specific generators. This helped to avoid double counting materials when the data was aggregated. In some cases, companies were unable to provide this information due to confidentiality agreements. In all cases, DSM has attempted to identify any instances of material being double counted and address those in the process of aggregating data.

Fifth, DSM collected data from DSWA on recyclable materials handled through DSWA facilities, including the assumed source of the material (residential vs. commercial) and the end-users. Data reported by DSWA is included in the aggregated tonnages.

Finally, on a case-by-case basis, if a generator of recyclables failed to respond to the CY 2025 survey, data from CY 2024 or CY 2023 was used as a placeholder, but only if DSM expected that no major changes

[5] *Due to February 15th, 2026, being a Sunday, the deadline for this annual report was extended to February 16th, 2026.*

[6] *Some large employers or small manufacturers were found to use an instate hauler for all or most of their recyclables and therefore annual reporting was not necessary. However, these companies are left on the list so that every five years their status might be revisited.*

to that company had occurred. This methodology is consistent with previous reporting years.

Final Material Categories

Brief descriptions of the material categories surveyed and tracked are listed in Table 1 of this report. For each material, the primary generator sector (residential/household or commercial/institutional) and the typical types of organizations that report that material as recycled are listed.

Limitations to Results

As with previous years, DSM has continued to follow the same methodology that counts only materials reported to be recycled. While it is possible to make estimates based on a material flow methodology or the use of waste generation or recycling coefficients, DSM continues to only count materials that are reported by organizations to be recycled. Assuming that materials are not double counted, this methodology makes it more likely that materials are underreported versus overreported. However, as the same methodology is used each year, it allows for a more accurate and informative comparison between reporting years.

Other limitations include DSM's reliance on the reporters to provide data in 'good faith'; and, while DSM believes most entities do so to the best of their ability, there continue to be irregularities in data reported. These irregularities may be due to the following:

- A change in the contact person which can result in inconsistencies in material reporting and accounting year-over-year; or
- Incomplete survey data due to confidentiality agreements.
- Third party brokers and/or employees that work on a national scale completing reports and therefore being unable to answer specific questions related to changing material streams as they relate to business operations or as they relate to Delaware specific locations.

A change in an organization's contact person has been an ongoing challenge as rarely DSM or DNREC is notified of the change, and in some cases, the contact's e-mail address and phone number remain active after they leave the company. As with the CY 2024 report, DSM noted a significant turnover in contacts for this CY 2025 report.

New individuals who report for an organization may follow a different process to account for annual recycling tonnages than the previous reporter. For example, a contact may report only materials taken into inventory instead of those sold during that CY, resulting in inconsistencies for materials reported year-to-year. DSM made every effort to address inconsistencies that were believed to be due to a changing methodology, but in many cases, the report had to be accepted 'as is.' Additionally, the increased turnover of individuals limits DSM's ability to develop a relationship with the reporter, limiting the amount of anecdotal information they are willing to share.

Incomplete survey data continues to lead to irregularities in data submitted. Some reporters use or sell to more than one processor (or broker) but do not report (or carefully track) the quantity of material sold to each during the past CY. In the current recycling climate, this practice is more common with spot market conditions being more critical to moving material. Processing facilities or brokers may provide a list of who sent them material in a given year, but not specific materials or volumes received. This can result in the double-counting of materials.

Third party brokers are becoming increasingly more commonly used as the reporting party for large retailers. These brokers are not privy to internal business changes or sales records, and for this reason cannot definitively answer questions on changing material streams or tonnages. For example, one large retailer reported a significant decrease in cardboard collected. Since their report is completed by a third party broker, they were only able to speculate on potential causes of this decrease.

The mandatory nature of this reporting requirement only extends to reporters submitting a report and does not require them to address follow-up questions or give insights into why material streams and/or tonnages may have varied over the previous year's report. Due to this, at times it can be difficult to obtain any additional anecdotal information from reporters. Additionally, in the case of national companies the reporter may not be Delaware based and cannot address material generation changes seen at locations within Delaware specifically.

It is important to note that this report has been undertaken annually since 2007 in an effort to calculate the State of Delaware's Recycling Rate and measure progress of recycling efforts in the State. Since 2007 many things have changed the composition of the recycling stream including (but not limited to): packaging preferences, weight of recyclables, and consumer purchasing preferences. All of these changes have impacted both the 'mix' of the recycling stream and the overall weight of materials. As we see a shift more toward lightweight plastics, or lighter format cardboards, we see the overall tons of material recycled stagnate or in some cases decline. This stagnation or decline is not necessarily reflective of a decrease in recycling in Delaware, but rather may reflect changes in packaging, consumer behavior, etc.

Given these limitations, changes of a few percentage points up or down from year to year should be considered to essentially be equivalent year-to-year.

SURVEY RESULTS

Summary

The results of the CY 2025 MSW Recycling Survey are presented in Table 2 (below). Table 2 compares the CY 2025 results against the CY 2024 results. Table 3 (next page) provides more detailed information on the CY 2025 and CY 2024 MSW Recycling Survey Results.

TABLE 2: SUMMARY COMPARISON OF MATERIAL RECYCLED, CY 2025 – CY 2024
(TONS BY GENERAL MATERIAL CATEGORY)

Material Category	2025 (Tons)	2024 (Tons)	Difference (Tons)	Percent Change 2025- 2024 (%)
Paper, Paper Packaging	86,601	95,377	(8,777)	-9%
All Other Packaging	9,113	10,666	(1,553)	-15%
Mixed Recyclables	112,163	117,817	(5,653)	-5%
Net Packaging	**207,877**	**223,860**	**(15,983)**	**-7%**
Vehicle Waste	14,844	14,669	175	1%
Special Waste	27,067	22,420	4,647	21%
Organic Waste	177,260	162,608	14,652	9%
Metals	28,552	29,988	(1,436)	-5%
Other	337	373	(36)	-10%
TOTAL:	**455,938**	**453,918**	**2,019**	**0%**

Figure 1 (below) illustrates the results of the CY 2025 MSW Recycling Survey

FIGURE 1: MATERIALS RECYCLING BY GENERAL MATERIAL CATEGORY INCLUDED IN THE EPA DEFINITION OF MSW RECYCLING
(STATE OF DELAWARE, CY 2025)

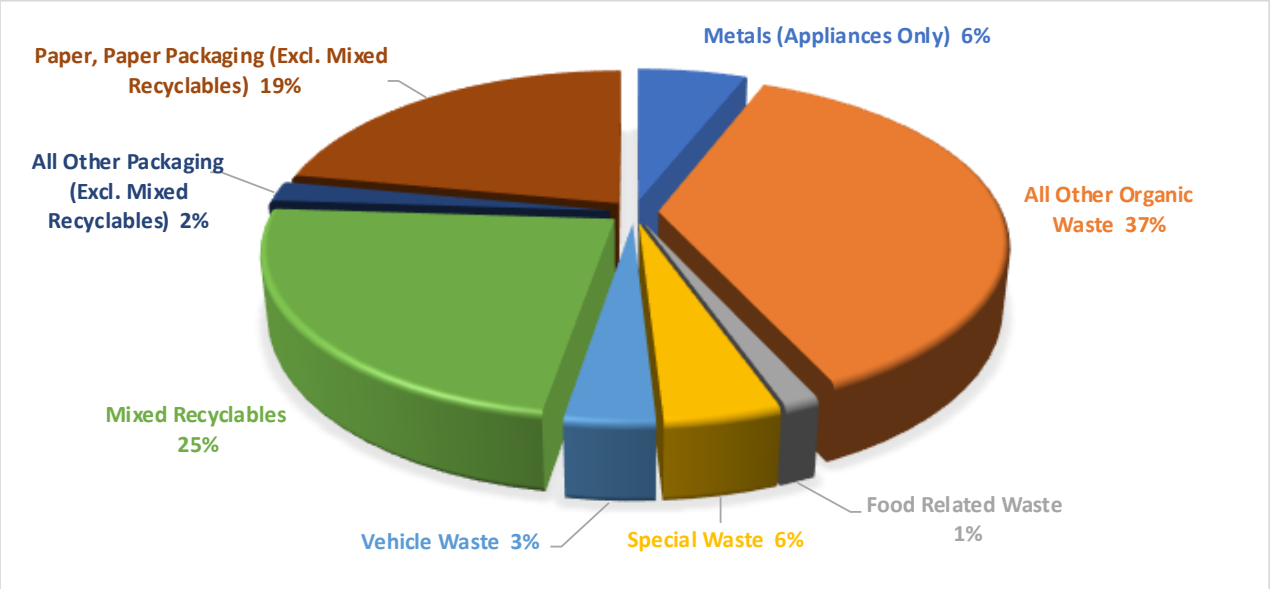

TABLE 3: DETAILED COMPARISON OF MSW MATERIALS RECYCLED IN DELAWARE, CY 2025 AND 2024

Material Category	CY 2025 Total (Tons)	CY 2024 Total (Tons)	*Difference, 2025 - 2024* Total (Tons)	Difference (%)
Paper, Paper Packaging (1)				
Corrugated (OCC)	60,030	67,519	(7,489)	-11%
Newspaper (ONP) (2)	4,768	3,150	1,618	51%
Sorted Office Paper	9,763	12,211	(2,448)	-20%
Mixed Paper	12,040	12,498	(458)	-4%
Subtotal:	*86,601*	*95,377*	*(8,777)*	*-9%*
All Other Packaging				
Glass (3)	147	138	8	6%
Plastic Film /Wrap (4)	676	679	(3)	0%
Retail Bags (4)	100	152	(52)	-34%
Plastic Containers (5)	2,160	2,627	(468)	-18%
Polystyrene Packaging	30	36	(5)	-15%
Aluminum Cans	166	199	(33)	-17%
Pallets	5,834	6,835	(1,001)	-15%
Subtotal:	*9,113*	*10,666*	*(1,553)*	*-15%*
Mixed Recyclables (6)	112,163	117,817	(5,653)	-5%
Subtotal:	*112,163*	*117,817*	*(5,653)*	*-5%*
Vehicle Waste				
Tires (7)	9,440	10,087	(647)	-6%
Lead Acid Batteries	5,009	4,058	951	23%
Oil Filters (8)	394	524	(129)	-25%
Subtotal:	*14,844*	*14,669*	*175*	*1%*
Special Wastes				
Carpet	-	-	-	-
Textiles	25,399	20,732	4,668	23%
Mattresses	11	11	0	0%
Fluorescent Bulbs	48	41	8	19%
Electronic Goods	1,494	1,525	(31)	-2%
Other Batteries	115	112	3	2%
Subtotal:	*27,067*	*22,420*	*4,647*	*21%*
Organic Wastes				
Fats, Oil, Grease	2,895	3,393	(499)	*-15%*
Food Waste (9)	3,569	2,624	945	*36%*
Leaf and Yard Waste (10)	122,134	107,664	14,470	*13%*
Trees and Branches (10)	47,842	48,011	(169)	*0%*
Clean Wood	821	916	(95)	*-10%*
Subtotal:	*177,260*	*162,608*	*14,652*	*9%*
Metals				
White Goods (11)	28,552	29,988	(1,436)	-5%
Subtotal:	*28,552*	*29,988*	*(1,436)*	*-5%*
Other				
Mixed Plastics	337	373	(36)	-10%
Subtotal:	*337*	*373*	*(36)*	*-10%*
Total (12)	*455,938*	*453,918*	*2,019*	*0%*

TABLE 3 NOTES:

1. *Paper, Paper Packaging: All paper and paper packaging was included as MSW even in cases where processors did not reveal sources (therefore some printer overruns may be included). Note that mixed recyclables include different types of paper and paper packaging and therefore the totals for paper and paper packaging do not include this material.*
2. *Corrugated (OCC): Includes baled and loose OCC.*
3. *Glass: Glass recycling is most often included in the reported Mixed Recyclables number and varies as an individually reported commodity year-over-year.*
4. *Plastic Film/Wrap and Retail Bags: Before 2014 plastic film/wrap and retail bags were reported under 'plastic film/wrap'.*
5. *Plastic Containers: An error in CY 2024 Tonnage was identified and corrected in this CY 2025 Report*
6. *Mixed Recyclables: Recyclables reported as single stream or commingled. This category was previously reported as part of the All Other Packaging category, however, in CY 2021 it was determined that it would be best to start reporting it as a separate category due to its overall tonnage. Mixed Recyclables are primarily collected by haulers from residential and commercial locations and includes paper, plastics, tin cans, aluminum, and glass materials collected from municipal recycling programs. As with previous years' reports, the total tons reported are incoming tonnages from Delaware collectors, therefore these tons do include residue. Additional discussion of the role of residue is in the following section entitled "Other Packaging Waste".*
7. *Tires: Tires reported do not include tires sent for tire-derived fuel (TDF), tire reporters only report to DSM tires that are not sent to TDF as they are aware DSM does not account for tires sent to TDF in this report.*
8. *Oil Filters: Oil filters are reported primarily by recyclers and do not include any reported waste oil that is recycled.*
9. *Food Waste: Includes seafood shells reported as recycled through non-profits to reinforce the Delaware shoreline.*
10. *Leaf and Yard Waste and Trees and Branches: Reported primarily by green waste companies. In most cases, reporters operate drop-off locations where third parties can bring material to be mulched or composted by the reporter. Due to this, and the frequent lack of a weigh scale, green waste reporters generally estimate the annual total tons and source of materials processed at their yard. For this reason, it is important to note that these two material categories reported tonnages do vary year to year.*
11. *White Goods: White goods are common household appliances that are recycled. Generally, this category is reported by scrap metal recyclers as well as some large retailers. In the case of scrap metal recyclers, appliances are typically a small portion of the total amount of scrap metal diverted for recycling. The remaining material is calculated every five years as part of the Total Solid Waste Diversion Rate.*
12. *Total: The total tons may not add due to rounding. CY 2024 Total Tons has been updated to reflect an error in the CY 2024 Report Plastic Container Tons.*

Paper Recycling

TABLE 4 - 1: PAPER AND PAPER PACKAGING

Material Category	2025 (Tons)	2024 (Tons)	Difference (Tons)	Percent Change 2025 - 2024 (%)
Paper, Paper Packaging				
Corrugated (OCC)	60,030	67,519	(7,489)	-11%
Newspaper (ONP)	4,768	3,150	1,618	51%
Sorted Office Paper (SOP)	9,763	12,211	(2,448)	-20%
Mixed Paper	12,040	12,498	(458)	-4%
TOTAL:	**86,601**	**95,377**	**(8,777)**	**-9%**

Paper and Paper Packaging reported as generated in Delaware and recycled decreased by 9 percent in CY 2025.

- Corrugated (OCC) reported as recycled by Delaware generators decreased by 7,500 tons (rounded) in CY 2025. The decreases in CY 2024 continue a downward trend in reported OCC tons from a high of roughly 89,000 reported tons in CY 2022 to the current 60,030 tons. The decrease in CY 2025 was seen most significantly in reports from large recyclers. It is important to note that two retailers that had been carried over due to non-reporting have 'timed out' from the numbers, and therefore their materials have been dropped from the aggregated totals. This change did include OCC tons.[7]

- Mixed Paper reported for CY 2025 decreased by roughly 500 tons and Sorted Office Paper (SOP) decreased by roughly 2,500 tons. These two categories have tended to fluctuate year-over-year, driven by market prices and changing consumer habits.

- Newspaper (ONP) saw an increase of roughly 1,600 tons in CY 2025. It is believed these increases are due to closures and acquisitions in the publishing market, resulting in more tons of ONP being recovered in Delaware.

[7] It will be necessary for DNREC to increase their efforts to enforce the mandatory reporting requirement if the annual recycling report is to remain viable in coming years.

All Other Packaging

TABLE 4 – 2: ALL OTHER PACKAGING

Material Category	2025 (Tons)	2024 (Tons)	Difference (Tons)	Percent Change 2025 - 2024 (%)
All Other Packaging				
Glass	147	138	8	6%
Plastic Film/Wrap	676	679	(3)	0%
Retail Bags	100	152	(52)	-34%
Plastic Containers	2,160	2,627	(468)	-18%
Polystyrene Packaging	30	36	(5)	-15%
Aluminum Cans	166	199	(33)	-17%
Pallets	5,834	6,835	(1,001)	-15%
TOTAL:	**9,113**	**10,666**	**(1,553)**	**-15%**

The 'All Other Packaging' category includes common residential and commercial recyclables that are not fiber-based or included in mixed recyclables category. In CY 2025, overall tons of All Other Packaging decreased by roughly 1,600 tons.

- Retail Bags reported decreased by roughly 50 tons. This decrease was the result of two retailers data 'timing out' of the reporting methodology, thus their tonnage being dropped from the aggregated results.
- CY 2024 Plastic Container tons were updated to reflect an error in CY 2024.
- Reported pallets decreased roughly 1,000 tons and are now consistent with tonnage reported in CY 2023.

Mixed Recyclables

TABLE 4 – 3: MIXED RECYCLABLES

Material Category	2025 (Tons)	2024 (Tons)	Difference (Tons)	Percent Change 2025 - 2024 (%)
Mixed Recyclables				
Mixed Recyclables	112,163	117,817	(5,653)	-5%
TOTAL:	**112,163**	**117,817**	**(5,653)**	**-5%**

Mixed Recyclables include recyclable materials such as glass, plastic bottles, paper, cardboard, and steel and aluminum cans. These materials are collected through residential curbside and drop off programs as well as commercial on-site single stream recycling programs. The tonnages included in the mixed recyclables category are primarily reported by material recycling facilities (MRFs) and haulers. Because MRFs and haulers are the primary reports of this material stream, tons reported are either collected tons, or the incoming stream of recyclable to a MRF.

The reported tons of Mixed Recyclables include residue, also referred to as contamination, which is materials set out for recycling collection that cannot be recycled. The residue rate in Delaware in CY 2021/CY 2022 was 20 percent based on data obtained by DSM through three seasons of hauler audits completed from July 2021 through March of 2022. It is assumed that the residue rate has remained relatively consistent year over year.

Residue is not subtracted from the reported Mixed Recyclables or from any other material category. It is important to note that the Mixed Recyclables category has the greatest potential for high residue rates compared to other materials reported. For this reason, when benchmarking Delaware, the issue of residue should be taken into consideration.

Vehicle Waste

TABLE 4 – 4: VEHICLE WASTE

Material Category	2025 (Tons)	2024 (Tons)	Difference (Tons)	Percent Change 2025 - 2024 (%)
Vehicle Waste				
Tires	9,440	10,087	(647)	-6%
Lead Acid Batteries	5,009	4,058	951	23%
Oil Filters	394	524	(129)	-25%
TOTAL:	14,844	14,669	175	1%

In CY 2025, roughly 14,850 tons of vehicle waste were reported as recycled from Delaware generators, representing an increase of 1% over CY 2024.

- Lead Acid Battery recycling increase by roughly 951 tons. Significant increases were reported by two large firms, in one case the increase could be attributed to additional locations within Delaware.

- Oil Filter recycling decreased by roughly 130 tons, or 25% returning annual tonnages back to a level seen in CY 2023. In CY 2024 a significant increase in Oil Filters was reported by one firm, strongly impacting the reported tons per year.

Special Wastes

TABLE 4 – 5: SPECIAL WASTE

Material Category	2025 (Tons)	2024 (Tons)	Difference (Tons)	Percent Change 2025 - 2024 (%)
Special Waste				
Carpet	-	-	-	-
Textiles	25,399	20,732	4,668	23%
Mattresses	11	11	-	0%
Fluorescent Bulbs	48	41	8	19%
Electronic Goods	1,494	1,525	(31)	-2%
Other Batteries	115	112	3	2%
TOTAL:	27,067	22,420	4,647	21%

Special Waste recycling increased by 4,668 tons, or 21 percent over CY 2024.

- Textile recycling increased by 23%, attributed primarily to a large increase in tons reported as recycled by one reporter.

Organic Wastes: Food Waste

TABLE 4 – 6: FOOD WASTE

Material Category	2025 (Tons)	2024 (Tons)	Difference (Tons)	Percent Change 2025 - 2024 (%)
Food Waste				
Fats, Oils, Grease	2,895	3,393	(499)	-15%
Food Waste	3,569	2,624	945	36%
Food Donations	116	173	(57)	-33%
TOTAL:	**6,579**	**6,190**	**389**	**6%**

Food Waste diversion increased in CY 2025 by 6 percent.

- Fats, Oils, Grease (FOG) decreased by 15%. In CY 2023 we saw consolidation within this sector of the recycling industry which resulted in new contacts completing the reporting forms potentially utilizing a different methodology causing fluctuations in reported tonnage.

- Food Waste diversion increased by 36 percent in CY 2025 potentially signifying a greater focus on food waste diversion by the commercial sector or increased opportunities for food waste diversion in the region.

Organic Wastes: Green Waste

TABLE 4 – 7: GREEN WASTE

Material Category	2025 (Tons)	2024 (Tons)	Difference (Tons)	Percent Change 2025 - 2024 (%)
Green Waste				
Leaf and Yard Waste	122,134	107,664	14,470	13%
Trees and Branches	47,842	48,011	(169)	0%
Clean Wood	821	916	(95)	-10%
TOTAL:	**170,797**	**156,591**	**14,206**	**9%**

In CY 2025 we see a 9 percent increase in Green Waste.

The Green Waste category fluctuates year-over-year as many factors can play a part in the amount of green waste reported for diversion. Two of the main factors that seem to influence the tons reported year-over-year are weather-related events, and the consistency of the reporter. Since CY 2018 this category has seen regular percent changes (increases or decreases) around 10 percent year-over-year.

A relatively mild weather year can result in lower green waste tons reported as there is less material to clean up after weather related events, whereas a year with significant weather-related events can result in higher than average green waste tons reported. Additionally, many reporters estimate the annual tons handled and the category those tons are attributed to. These estimates take place for two reasons; first, some green waste companies do not have scales, and tonnages are estimated based on load count or truck size, and second, green waste processors do not typically track incoming material as yard waste versus trees and branches, so they again, need to estimate.

DSM believes that the estimates provided by green waste processors are consistent with previous years' estimates as it is frequently the same contact person providing the estimate.

Scrap Metals

TABLE 4 – 8: SCRAP METAL

Material Category	2025 (Tons)	2024 (Tons)	Difference (Tons)	Percent Change 2025 - 2024 (%)
Metals				
White Goods	28,552	29,988	(1,436)	-5%
TOTAL:	**28,552**	**29,988**	**(1,436)**	**-5%**

White good (appliance) recycling decreased by 5 percent in CY 2025. Appliance recycling is primarily reported by scrap metal recyclers who do not always track them as separate materials but rather provide DSM with annual estimates. It is also the case that there continues to be light-weighting of appliances with increased substitution of plastics for metal components.

Estimating Residential vs. Commercial Recycling Activity

Residential (household) and commercial (industrial, commercial, and institutional) recycling activities covered under the definition of MSW recycling are accounted for separately in this report. All reporters are asked to identify the percentage of total tons of each material reported as derived from residential versus commercial sources. If they are not certain of the source because of how materials are consolidated (either collected from multiple locations or delivered to processing facilities), estimates must be made by the reporter.

Since the EPA does not track or estimate residential and commercial recycling separately, generally accepted guidelines for the allocation of recyclables to the residential versus the commercial sectors are not available. DSM relies on survey results to make these estimates for many materials but for some materials, more accurate estimates were necessary.

To address this, DSM worked with RPAC's Methods and Methodology Subcommittee (now called the Measurement and Reporting Subcommittee) in the early years of reporting to develop acceptable allocations of materials recycling to the commercial and the residential sectors. To maintain consistency from one year to the next this approach has been carried forward each year. In the case of yard waste and trees and branches, a 2004 (updated in 2015) survey of landscapers, mulchers, and tree companies has been used to determine the source and develop an allocation. Table 5-1 (below) presents the residential/commercial allocations and the source used to make these estimates. Materials not included in the list of standard allocations found in Table 5-1 are allocated each year based on data provided by reporters.

TABLE 5-1: MATERIALS THAT USE STANDARD ALLOCATIONS FOR RESIDENTIAL VS. COMMERCIAL RECYCLING ACTIVITY

Material	% Residential	% Commercial	Source
Aluminum Cans	90%	10%	RPAC, M&R
Retail Bags	100%	0%	RPAC, M&R
Leaf and Yard Waste	90%	10%	2015 Yard Waste Survey
Trees and Branches	50%	50%	2015 Yard Waste Survey
Tires	80%	20%	RPAC, M&R
Lead Acid Batteries	80%	20%	RPAC, M&R
Oil Filters	80%	20%	RPAC, M&R
Textiles	100%	0%	Except for Industry Reports
Mattresses	100%	0%	RPAC, M&R
Other Batteries	90%	10%	RPAC, M&R
White Goods	90%	10%	RPAC, M&R

TABLE 5-2: ESTIMATE OF RESIDENTIAL VS. COMMERCIAL MSW RECYCLING ACTIVITY (CY 2025)[8]

Material Category	*Residential* (tons)	*Commercial* (tons)	Total MSW (tons)
Paper, Paper Packaging			
Corrugated (OCC)	801	59,229	60,030
Newspaper (ONP)	0	4,768	4,768
Sorted Office Paper	0	9,763	9,763
Mixed Paper	402	11,637	12,040
Subtotal:	1,203	85,398	86,601
All Other Packaging			
Glass	0	147	147
Plastic Film / Shrink Wrap	0	676	676
Retail Bags	100	0	100
Plastic Containers	13	2,147	2,160
Polystyrene Packaging	27	3	30
Aluminum Cans	149	17	166
Mulched Pallets	0	5,834	5,834
Subtotal:	290	8,823	9,113
Mixed Recyclables			
Mixed Recyclables	80,205	31,959	112,163
Subtotal:	80,205	31,959	112,163
Green Waste			
Leaf and Yard Waste	109,921	12,213	122,134
Trees and Branches	23,921	23,921	47,842
Clean Wood	0	821	821
Subtotal:	133,842	36,955	170,797
Food Related Wastes			
Food Waste	0	3,569	3,569
Fats, Oil, Grease	0	2,895	2,895
Subtotal:	0	6,463	6,463
Vehicle Waste			
Tires	7,552	1,888	9,440
Lead Acid Batteries	4,007	1,002	5,009
Oil Filters	316	79	394
Subtotal:	11,875	2,969	14,844
Special Wastes			
Carpet	0	0	0
Textiles	19,386	6,014	25,399
Mattresses	11	0	11
Fluorescent Bulbs	0	48	48
Electronics	973	521	1,494
Other Batteries	103	11	115
Subtotal:	20,473	6,594	27,067
Metals			
White Goods	25,697	2,855	28,552
Subtotal:	25,697	2,855	28,552
Other			
Mixed Plastics	0	337	337
Subtotal:	0	337	337
Total:	273,584	182,354	455,938

[8] Numbers may not add up due to rounding.

CALCULATING THE RECYCLING RATE FOR DELAWARE

Calculating the Denominator

Delaware, unlike many states, has instituted flow control for all MSW generated in the state. This allows the State to more easily track and maintain accurate data on annual MSW generation and disposal. An additional benefit is having one entity, DSWA, consistently track incoming waste deliveries by having scales at every facility and maintaining a uniform approach to track and keep detailed scale records on the vehicle type, waste type, and load weight of all deliveries.

This allows DSWA to provide DSM with accurate scale data on deliveries of all Delaware waste to the three landfills and the three transfer stations during CY 2025. Using these data DSM followed a standardized methodology (as used in previous years) to disaggregate construction and demolition (C&D) waste delivered to DSWA facilities to make an accurate estimate of the total MSW disposal in Delaware, as well as to allocate municipal solid waste (MSW) disposed of as either residential or commercial.

The methodology follows these steps:

First, DSWA provided DSM with CY 2025 data on solid waste deliveries to each of their six facilities. The data provided classified waste deliveries as MSW, C&D, or special wastes to each facility.

Second, DSM obtained data on the quantity of solid waste delivered by each vehicle type to each DSWA facility (e.g., front-end loader, rear loader, side loader, roll-off, pick-up truck, etc.). Using 2011 and 2015 scale house survey data on the typical source of waste coming into each facility by vehicle type, DSM allocated the annual waste tonnages reported for CY 2025 for each vehicle type to either residential, commercial, C&D, or self-haul generator categories.

Third, DSM totaled residential, commercial, C&D, and self-haul waste quantities for each facility calculated by the vehicle type allocations and weights delivered by those vehicles, to calculate the total tons of residential, commercial, C&D, and self-haul waste delivered statewide for CY 2025 as illustrated in Table 6-1 (below).

TABLE 6-1: SELF-HAUL, RESIDENTIAL, COMMERCIAL, AND C&D WASTE DELIVERIES TO DSWA FACILITIES BASED ON VEHICLE TYPE (2025)[9]

	Waste, By Generator Type, CY 2025				
DSWA Facility	Self Haul *(tons)*	Residential *(tons)*	Commercial *(tons)*	C&D *(tons)*	Total
NSWMC	28,129	157,161	196,499	34,323	416,112
CSWMC	5,897	39,723	68,672	18,082	132,373
SSWMC	34,437	34,237	64,681	116,838	250,193
PTCTS	6,700	44,585	31,769	6,649	89,703
MTS	3,473	15,847	17,144	1,288	37,752
RT5TS	5,724	52,333	45,335	4,465	107,857
TOTAL:	84,359	343,886	424,100	181,645	1,033,990

[9] Numbers may not add up due to rounding.

Fourth, after calculating out the total tons of residential, commercial, C&D, and self-haul waste delivered statewide for CY 2025 (Table 6-1), the self-haul waste totals were then allocated equally between residential, commercial, and C&D sources consistent with past surveys of facility self-haul areas. This step is illustrated in Table 6-2 (below).

Finally, DSM subtracted the aggregated C&D tonnage leaving residential and commercial MSW tonnages only, as illustrated in Table 6-2 (below)

TABLE 6-2: REALLOCATION OF SELF-HAUL WASTE TO RESIDENTIAL, COMMERCIAL, AND C&D SECTOR TO ESTIMATE TOTAL RESIDENTIAL AND COMMERCIAL WASTE DELIVERIES TO DSWA FACILITIES (CY 2025)

SECTOR	Total from Table 6-1 *2025 (tons)*	Reallocation of Self-haul Deliveries *2025 (tons)*	Minus Tires and Yard Waste Diverted *2025 (tons)*	TOTAL MSW Disposal *2025 (tons)*
Residential	343,886	28,120	-8,868	363,138
Commercial	424,100	28,120	-1,458	450,762
C&D	181,645	28,120	-3,538	
Self Haul	84,359			
TOTAL:	**1,033,990**	**84,359**	**-13,864**	**813,900**

By taking the steps outlined, the total MSW disposal for CY 2025 is estimated to be 813,900 tons.

Calculating the Recycling Rate

Using totals from Table 5-2 for residential and commercial recycling activity in the numerator and the results of Tables 6-1 and 6-2 in the denominator, the residential and commercial recycling rates are calculated along with Delaware's overall MSW recycling rate.

This is shown in the last column of Table 7.

TABLE 7: CALCULATION OF RESIDENTIAL AND COMMERCIAL RECYCLING RATE, AND THE TOTAL MSW RECYCLING RATE (CY 2025)

Sector	(A) Recycling *(tons)*	(B) Disposal *(tons)*	(A) + (B) Total Generation *(tons)*	A / (A + B) Recycling Rate *(%)*
Residential	273,584	363,138	636,722	**43%**
Commercial	182,354	450,762	633,115	**29%**
TOTAL:	**455,938**	**813,900**	**1,269,837**	**36%**

APPENDIX A

SCOPE OF MATERIALS AND ACTIVITIES INCLUDED IN THE STANDARD MSW RECYCLING RATE SOURCE: EPA 1996

TABLE A. SCOPE OF MATERIALS INCLUDED IN THE STANDARD MSW RECYCLING RATE

MATERIAL[1]	WHAT IS MSW	WHAT IS NOT MSW[2]
Food Scraps	Uneaten food and food preparation wastes from residences and commercial establishments (restaurants, supermarkets, and produce stands), institutional sources (school cafeterias), and industrial sources (employee lunchrooms).	Food processing waste from agricultural and industrial operations.
Glass Containers	Containers; packaging; and glass found in appliances, furniture, and consumer electronics.	Glass from transportation equipment (automobiles) and construction and demolition (C&D) debris (windows).
Lead-Acid Batteries	Batteries from automobiles, trucks, and motorcycles.	Batteries from aircraft, military vehicles, boats, and heavy-duty trucks and tractors.
Tin/Steel Cans and Other Ferrous Metals	Tin-coated steel cans; strapping; and ferrous metals from appliances (refrigerators), consumer electronics, and furniture.	Ferrous metals from C&D debris and transportation equipment.
Aluminum Cans and Other Nonferrous Metals	Aluminum cans; nonferrous metals from appliances, furniture, and consumer electronics; and other aluminum items (foil and lids from bimetal cans).	Nonferrous metals from industrial applications and C&D debris (aluminum siding, wiring, and piping).
Paper	Old corrugated containers; old magazines; old newspapers; office papers; telephone directories; and other paper products including books, third-class mail, commercial printing, paper towels, and paper plates and cups.	Paper manufacturing waste (mill broke) and converting scrap not recovered for recycling.
Plastic	Containers; packaging; bags and wraps; and plastics found in appliances, furniture, and sporting and recreational equipment.	Plastics from transportation equipment.
Textiles	Fiber from apparel, furniture, linens (sheets and towels), carpets[3] and rugs, and footwear.	Textile waste generated during manufacturing processes (mill scrap) and C&D projects.
Tires	Tires from automobiles and trucks.	Tires from motorcycles[4], buses, and heavy farm and construction equipment.
Wood	Pallets; crates; barrels; and wood found in furniture and consumer electronics.	Wood from C&D debris (lumber and tree stumps[5]) and industrial process waste (shavings and sawdust).
Yard Trimmings	Grass, leaves, brush and branches, and tree stumps.[5]	Yard trimmings from C&D debris.
Other	Household hazardous waste (HHW)[6], oil filters, fluorescent tubes[7], mattresses, and consumer electronics.	Abatement debris, agricultural waste, combustion ash, C&D debris, industrial process waste, medical waste, mining waste, municipal sewage and industrial sludges, natural disaster debris[8], used motor oil, oil and gas waste, and preconsumer waste.

TABLE A. NOTES

[1] Composite materials are categorized according to their main constituent; however, they can be designated as a separate category under Other MSW if they cannot be otherwise categorized.

[2] These wastes are not considered MSW due to one or more of the following reasons: (1) they are not defined as MSW in EPA's *Characterization of Municipal Solid Waste in the United States*, (2) they have not been historically handled and disposed of as MSW, (3) they are regulated as hazardous waste, and/or (4) they were generated by a preconsumer source. These non-MSW wastes are referred to as Other Solid Waste in this guide and on the survey forms and worksheets.

[3] Carpets are categorized as Textiles when discarded in MSW and are included in the rate calculation. When carpets are discarded in C&D debris, they are not considered MSW and are excluded from the rate calculation.

[4] Tires from motorcycles are not defined as MSW because they historically have not been characterized as MSW in EPA's *Characterization of Municipal Solid Waste in the United States*.

[5] Tree stumps are categorized as Yard Trimmings when discarded in MSW and are included in the rate calculation. When tree stumps are discarded in C&D debris, they are not considered MSW and are excluded from the rate calculation.

[6] HHW includes paints, stains, varnishes, solvents, pesticides, and other materials or products containing volatile chemicals that catch fire, react, explode under certain circumstances, or that are corrosive or toxic. Specific examples include oil-based paint, antifreeze, household cleansers, and bug sprays. Used motor oil is excluded.

[7] Fluorescent tubes are categorized as Other MSW when found in MSW and are included in the rate calculation. When fluorescent tubes are discarded in C&D debris, they are not considered MSW and are excluded from the rate calculation.

[8] Natural disasters include earthquakes, floods, hurricanes, and tornados. Heavy storms are not considered natural disasters.

TABLE B. SCOPE OF ACTIVITIES INCLUDED IN THE STANDARD MSW RECYCLING RATE

RECYCLABLE MATERIAL	WHAT COUNTS AS RECYCLING	WHAT DOES NOT COUNT AS RECYCLING[1]
Food Scraps	Composting of food scraps from grocery stores, restaurants, cafeterias, lunchrooms, and private residences, and the use of food scraps to feed farm animals.	Backyard (onsite) composting of food scraps, and the use of food items for human consumption (food banks).
Glass	Recycling of container and packaging glass (beverage and food containers), and recycling of glass found in furniture, appliances, and consumer electronics into new glass products such as containers, packaging, construction materials (aggregate), or fiberglass (insulation).	Recycling of glass found in transportation equipment and construction and demolition (C&D) debris, recycling of preconsumer glass or glass from industrial processes, and reuse of refillable glass bottles.
Lead-Acid Batteries	Recycling of lead-acid batteries found in cars, trucks, or motorcycles into new plastic and lead products.	Recycling of lead-acid batteries used in large equipment, aircraft, military vehicles, boats, heavy-duty trucks and tractors, and industrial applications.
Metals	Recycling of aluminum and tin/steel cans, and recycling of metals found in appliances and packaging into new metal products.	Reuse of metal containers, packaging, furniture, or consumer electronics, and recycling of metals found in transportation equipment (autobodies) and C&D debris.
Paper	Recycling of paper products (old newspapers and office papers) into new paper products (tissue, paperboard, hydromulch, animal bedding, or insulation materials).	Reuse of paper products, recycling of preconsumer or manufacturing waste (trimmings, mill broke, print overruns, and overissue publications), and combustion of paper for energy recovery.
Plastic	Recycling of plastic products (containers, bags, and wraps), and recycling of plastic from furniture and consumer electronics into new plastic products (fiber fill and plastic lumber).	Reuse of plastic products (storage containers and sporting equipment), recycling of preconsumer plastic waste or industrial process waste, and combustion of plastics for energy recovery.
Textiles	Recycling of textiles into wiper rags, and recycling of apparel and carpet fiber[2] into new products such as linen paper or carpet padding.	Reuse of apparel.
Tires	Recycling of automobile and truck tires into new products containing rubber (trash cans, storage containers, and rubberized asphalt), and use of whole tires for playground and reef construction.	Recycling of tires from motorcycles, buses, and heavy farm and construction equipment, retreading of tires, and combustion of tire chips for energy recovery.
Wood	Recycling of wood products (pallets and crates) into mulch, compost, or similar uses.	Repair and reuse of pallets, combustion of wood for energy recovery, recycling of industrial process waste (wood shavings or sawdust), and recycling of wood from C&D debris.
Yard Trimmings	Offsite recycling of grass, leaves, brush or branches[3], and tree stumps[4] into compost, mulch, or similar uses; and landspreading of leaves[5].	Mulching of tree stumps[4] from C&D debris, backyard (onsite) composting, grasscycling, landspreading of leaves[5], and combustion of yard trimmings for energy recovery.
Other	Household hazardous waste (HHW)[6], oil filters, fluorescent tubes[7], mattresses, circuit boards, and consumer electronics[8].	Recycling of used oil, C&D debris (asphalt, concrete, and natural disaster debris), transportation equipment (autobodies), municipal sewage sludge, and agricultural, industrial, mining, and food processing waste.

TABLE B. NOTES

[1] These activities are not considered recycling due to one or more of the following reasons: (1) they are not defined as recycling in EPA's *Characterization of Municipal Solid Waste in the United States*, (2) they involve the recycling of materials that are not part of MSW, (3) they involve reuse or source reduction, and/or (4) they involve the recycling of preconsumer waste.

[2] Carpeting is categorized as Textiles when discarded in MSW and is included in the rate calculation. When carpets are discarded in C&D debris, they are excluded from the rate calculation.

[3] Includes woody material such as branches, brush, and whole trees such as Christmas trees.

[4] Tree stumps are categorized as Yard Trimmings when discarded in MSW and are included in the rate calculation. When tree stumps are discarded in C&D debris, they are excluded from the rate calculation.

[5] Landspreading of leaves counts as recycling if the manner of the application allows timely biodegradation of the organic plant material. Landspreading of leaves does not count as recycling if the manner of the application precludes the timely biodegradation of the organic plant material.

[6] HHW includes paints, stains, varnishes, solvents, pesticides, antifreeze products, and other materials or products containing volatile chemicals that catch fire, react, explode under certain circumstances, or that are corrosive or toxic. Specific examples include oil-based paint, antifreeze, household cleansers, and bug sprays. Used motor oil is excluded.

[7] Fluorescent tubes are categorized as Other MSW when discarded in MSW and are included in the rate calculation. When fluorescent tubes are discarded in C&D debris, they are excluded from the rate calculation.

[8] Composite materials are categorized according to their main constituent; however, they can be designated as a separate category under Other if they cannot be otherwise categorized.

APPENDIX B

LETTER FROM DNREC & CY 2025 REPORTING FORM

DELAWARE DEPARTMENT OF
NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL

89 Kings Highway
Dover, DE 19901
302-739-9403
dnrec.delaware.gov

December 29, 2025

Subject: **Required Recycling Report Due February 16, 2026**

Dear Sir/Madam:

This letter serves as a reminder that your organization's calendar year 2025 recycling activity data is due February 16, 2026. The Delaware Solid Waste Recycling Law (Universal Recycling Law), specifically 7 Del. C. §6056(1), requires anyone who collects/transports, processes, or markets recyclables to report annually on the type and quantity of recyclables managed and the location and name of facilities where these recyclables are sent in order to ensure material reported is not double counted. The CY 2025 reporting form is attached to this letter along with more detailed information about how to correctly complete the reporting form.

Please remember that this mandatory reporting is on-going.

If you are amongst the majority of respondents that reported recyclables generation data previously, thank you for your response! Accurate information is critical to calculating the statewide recyclables diversion rate, tracking progress toward the State's established recycling goals, and making practical policy recommendations. These cannot be achieved if those persons responsible for managing recyclables fail to report.

If you did not respond previously, please be aware that reporting is mandatory and that 7 Del. C. §6059 affords the Department enforcement authority, inclusive of the ability to impose monetary fines of $100 to $500 for each day of violation. The Department intends to pursue one-hundred percent compliance.

DSM Environmental Services, Inc. (DSM) worked with Delaware's Recycling Public Advisory Council (RPAC) to design the survey reporting form and collect data on an annual basis, under both voluntary and mandatory reporting requirements, for several years now. Under strict agreement with DSM, survey participants have the option of keeping their report confidential.

DSM aggregates the survey data in an annual report to the RPAC to assure that individual company data are not reported. DSM also analyzes the data to ensure double counting does not occur and to determine the total quantity of materials recycled in Delaware. **Please complete the "end user" column on your reporting form so DSM can ensure that material and tonnages are not double-counted**.

This aggregated, statewide data is then supplied to the RPAC for the purpose of verifying and reporting Delaware's recyclables diversion rate. The RPAC annual report to the Governor provides an overview of recent recycling activities and can be found at: https://documents.dnrec.delaware.gov/dwhs/Recycling/RPAC/Twenty-Third-Annual-Report.pdf

To view the DSM Report of MSW recycling activity in CY 2024 please visit: State of Delaware Assessment of Municipal Solid Waste Recycling, Calendar Year 2024 Final Report

Attached to this letter you will find DSM's letter with more information on how to report along with the CY 2025 reporting form (due February 16, 2026).

If you have any questions regarding completion of reporting form, call Marissa Ambrosi of DSM at (603) 738-7036.

If you have questions about recycling reporting requirements, please contact Greg Williams of my staff at (302) 739-9403. I thank you in advance for your cooperation and we commend you for your ongoing recycling efforts.

Sincerely,

Timothy Ratsep
Division Director
Division of Waste & Hazardous Substances

DSM ENVIRONMENTAL SERVICES, INC.
Resource Economists
Environmental Scientists

Delaware Annual Recycling Activity Report Form

REPORT FORM FOR CALENDAR YEAR 2025

If you have any questions about this form, please e-mail Marissa Ambrosi at the third-party consulting firm, DSM Environmental, at marissa@dsmenvironmental.com. If you have questions about the reporting requirement, please contact DNREC's Compliance and Permitting Section at (302) 739-9403.

COMPANY INFORMATION

Company Name _____ Subsidiary of _____

Mailing Address _____ Contact Name _____

City _____ State _____ Zip _____ Title _____

Physical Address _____ Phone _____

☐ Same as mailing _____ Email _____

City _____ State _____ Zip _____

If you use a waste hauler or recycling service(s) to collect your recyclables please indicate the company (or companies) name, address and contact information and no further information is required ***unless we are unable to obtain quantities from your reported waste hauler or recycling service(s):***

_____

MATERIALS RECYCLED *(between January 1 and December 31, 2025)*

Material Type [1]	Annual Tons Recycled 2025	Please list the company and location where each material is sent for Recycling, Processing or End Use [2]	*Percent Commercial*	*Percent Residential*	*Approx.* percent of material originating from Delaware ONLY[3]
			%	%	%
			%	%	%
			%	%	%
			%	%	%
			%	%	%
			%	%	%
			%	%	%
			%	%	%
			%	%	%
			%	%	%

1. **List Each Material Type** (include materials recycled from the Annual MSW Recycling List)
2. **This information is important so that DSM does not double count material that is handled by another recycler that participates in our survey.**
3. If you handle recycling material generated outside the state of Delaware, estimate the percent of material from Delaware only .

NON-DISCLOSURE

The information provided is confidential. Check one: Yes ☐ No ☐

DSM Environmental Services, Inc. (DSM) will hold confidential any information and data provided to us which you specify as confidential, as part of the Delaware Statewide Municipal Recycling Annual Report that DSM is conducting for the Delaware Recycling Public Advisory Council (RPAC). The purpose of the study is to develop reasonable and professional estimates of the quantity of material recovered for recycling from residential and non-residential activities located in Delaware, and to ensure no double counting of material occurs. Data provided to DSM will be aggregated with all other material quantities reported to develop a single, annual quantity (in tons) of material recycled for each material type which will be reported in RPAC's annual report. Note that participating company names and participation status may be provided to RPAC upon request.

E-mail completed form to: DSM@DSMEnvironmental.com

DSM Environmental Services, Inc.
P.O. Box 2 • Windsor, VT 05089
603.738.7036
www.dsmenvironmental.com

APPENDIX C

DSM LETTER ON ANNUAL CY 2025 RECYCLING REPORT

DSM ENVIRONMENTAL SERVICES, INC.
Resource Economists
Environmental Scientists

December 29, 2025

Re: **Delaware Recycling Report for Calendar Year 2025**

To Whom It May Concern:

DSM Environmental Services, Inc. (DSM), with funding from the Delaware Solid Waste Authority, is once again working with the Delaware Department of Natural Resources and Environmental Control (DNREC) and the Delaware Recycling Public Advisory Council (RPAC) to complete the annual survey of all generators, haulers, and brokers of recyclables in the State of Delaware during calendar year 2025. As indicated in the letter from DNREC, annual reporting is mandatory, and a report is due by Monday, February 16, 2026.

The survey data will be compiled to become part of RPAC's annual report to the Legislature on Delaware's recycling rate. For more information on RPAC's recycling reports, see: https://dnrec.delaware.gov/recycling-public-advisory-council/

As in previous years, DSM is acting as an independent third party to carry out the survey and offer survey participants the opportunity for their data to remain confidential. Survey data collected will be aggregated by the weight of each material type for reporting purposes. No individual company data will be reported; however, participating company names and participation status may be reported to RPAC if requested. Please refer to the Executive Summary section of the following web link to view how the data collected will be reported to and used by RPAC: State of Delaware Assessment of Municipal Solid Waste Recycling, Calendar Year 2024 Final Report

Attached is the CY 2025 reporting form. Please list the weight of each material collected, either by direct measurement or by determining the weight of material sold or otherwise sent off-site or used on-site for recycling during the calendar year 2025, adjusted by the difference in weight of material held in inventory on the first and last day of the calendar year. If you are unable to provide exact weight information, reasonable estimates should be made. If you are using estimation methods to report, we request that you follow the same protocol from year to year to maintain consistency.

The CY 2025 reporting form is also available for download on our website in both an electronic version and one that you can print and fill out. A direct link can be found at: http://www.dsmenvironmental.com/active-project-resources

Information about how to download and complete the reporting form are included with this letter. Also please refer to the list of materials to report on and the definitions for each material type.

Please e-mail or mail back the completed survey form to DSM. Do not send the form to DNREC. You can either e-mail the completed form to: DSM@DSMEnvironmental.com or mail the completed form to:

DSM Environmental Services, Inc.
PO BOX 2
Windsor, VT 05089

82 Main St, PO Box 2, Windsor, VT 05089
Tel: 802.674.2840 Fax: 802.674.6915
www.dsmenvironmental.com

DSM ENVIRONMENTAL SERVICES, INC.
Resource Economists
Environmental Scientists

Need More Information?

If you have any questions about completion of the reporting form, please do not hesitate to contact Marissa Ambrosi by e-mail at marissa@DSMEnvironmental.com or call DSM at (603) 738-7036.

If you have questions about the reporting law or the deadline, please contact Greg Williams at DNREC at 302-739-9403.

Thank you for your help on this important initiative for Delaware.

Sincerely,
DSM Environmental Services, Inc.

Marissa Ambrosi

Marissa Ambrosi

82 Main St, PO Box 2, Windsor, VT 05089
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www.dsmenvironmental.com

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Completing the Recycling Survey Form:

Electronic Form
If you use the electronic form, follow these instructions so that your information displays correctly, and that you can save a copy for your records:

1. Download and save the form to your desktop.
2. **Open the saved form *from* your desktop in Adobe.**
3. Fill out the relevant fields as you normally would.
4. Once you have completed the form, double check your work before you save the form.
5. Submit the completed saved form to DSM via e-mail (DSM@DSMEnvironmental.com), you will need to attach the form to your e-mail.
6. Within one business day you should receive a confirmation e-mail.
7. Following submission, we recommend you save a copy of the completed PDF file and/or print a hard copy for your records.

Description of Information Requested on the Recycling Survey Form

Material Type – List each material you recycled in CY 2025. See Table 1 for a list of materials to report and definitions for each.

Company where material is sent for Recycling, Processing, or End Use – For each material, list the facility and location where the material has been sent for processing or end use. This information is critical to ensure that DSM does not double count material handled by another recycler that participates in the survey. **Your report will not be considered complete or in compliance with the reporting requirement if this information is excluded or if only a geographical location is listed**. **Additionally, please understand that we still may need to contact you for more information to confirm that double counting has not occurred.**

Percent Commercial (%) – Percentage of each material listed originating from businesses, industry, or institutions. This is important so that a commercial recycling rate can be separately calculated for Delaware.

Percent Residential (%) – Percentage of each material listed originating from residential sources, including apartment dwellers and multi-family households. This is important so that a residential recycling rate can be separately calculated for Delaware.

Approximate percent of material originating from Delaware only: Percentage of each material listed originating from generators located in Delaware (as opposed to out of the State). The recycling rate must be calculated only from recycled materials generated in Delaware.

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TABLE 1 – Annual MSW Recycling Report - List of Materials to Report and Definitions

Material Category	Definition
PAPER AND PAPER PACKAGING	
OCC (old corrugated containers)	Corrugated boxes (including cardboard containers, computer packaging cartons, and sheets and pieces of boxes and cartons) and Kraft paper bags include paper grocery bags, un-soiled fast-food bags, and department store bags) and heavyweight sheets of Kraft packing paper.
ONP (old newspapers)	All newspapers and glossy inserts, and all items made from newsprint, such as free advertising guides, election guides, plain news packing paper, stapled college schedules of classes, and tax instruction booklets.
Sorted Office Paper	High-grade paper (such as uncolored and or lightly colored bond, rag, printer/copier, or stationary grade paper) of which most is reported by document destruction companies or health care or financial institutions.
Mixed Paper	All other types of paper including magazines and catalogs, phone books and directories, junk mail, chipboard, and all other recyclable paper packaging.
NON-PAPER PACKAGING	
Mixed Glass (bottles and jars)	Clear, green, amber, or other colored glass beverage and food containers. Examples include whole or broken soda, beer, wine and liquor bottles, fruit juice bottles, peanut butter, mayonnaise and other food containers and jars.
Plastic Film / Shrink Wrap	Film that can be recycled and has not been greatly contaminated by other materials during its use. Examples include clean, recyclable plastic film, such as bread, grocery, newspaper, and dry cleaner plastic film bags, film packaging or wrapping, and stretch wraps used for shipping and containerizing pallets.
Plastic Retail Bags	Plastic retail and grocery sacks collected through retail collection sites.
Plastic Bottles and Containers (all Resins Except #6, Polystyrene)	Bottles, Jars, Containers and Tubs including clear or colored PETE (polyethylene terephthalate), natural and colored HDPE (high-density polyethylene) and all other plastic (3-7) bottles, jars and containers that have the potential to be recycled. This includes soft drink and water bottles, some liquor bottles, cooking oil bottles, milk and juice containers, laundry, detergent and shampoo bottles, food jars and containers, yogurt and take-out containers, and large jugs (well drained) used for vehicle and equipment fluids. This also includes clamshell, thermoform and press mold plastic packaging that has the potential for recycling.
Polystyrene Packaging	All expanded and rigid polystyrene packaging used for product packaging or food packaging. This includes clamshell, thermoform and press mold EPS/PS packaging that has the potential for recycling.
Aluminum Cans and Food Containers	Food or beverage containers made mainly of aluminum including aluminum soda or beer cans, and some pet food cans. This subtype does not include bimetal containers with steel sides and aluminum ends.
Single Stream or Mixed Recyclables	Recyclables reported as collected as a single stream or mixture of different categories of recyclables.
Pallets, mulched and other	Unpainted wood pallets, crates, and packaging made of lumber/engineered wood and ground for mulch or use in composting. Do not include rebuilt pallets.
GREEN WASTE	
Leaf and Yard Waste	Plant material from public or private landscapes that is no bigger than 4 inches in diameter. Examples include leaves, grass clippings, seaweed, and plants, prunings, shrubs, and small branches with branch diameters that do
Tree Waste	Woody plant material, branches, and stumps that exceed four inches in diameter from any public or private landscape. DO NOT INCLUDE LAND CLEARING DEBRIS
Clean Wood	All untreated and unpainted wood, including clean lumber and natural wood that is used for mulch, compost, or other products

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FOOD AND RELATED WASTE	
Food Waste	Food material resulting from the processing, storage, preparation, cooking, handling, or consumption of food.
Fats, Oils, Grease	Liquid or solid, composed primarily of fat, oil, and grease from animal or vegetable source
VEHICLE WASTE	
Tires	Tires from trucks, automobiles, motorcycles, heavy equipment, and bicycles. For tires on rims, an attempt to estimate the portion that is rubber tire vs. the ferrous rim should be made.
Lead Acid Batteries	Lead-acid batteries from passenger cars, trucks, and motorcycles and small equipment when reported separately.
Oil Filters	Oil filters from vehicles.
OTHER SPECIAL WASTES	
Textiles	Items made of thread, yarn, fabric, or cloth including clothes, fabric trimmings, draperies, and all natural and synthetic cloth fibers.
Electronics/Electronic Goods	Large and small electronic goods including microwaves, stereos, VCRs, DVD players, radios, and non-CRT televisions (such as LCD televisions); as well as computer related electronics such as processors, mice, keyboards, laptops, disk drives, printers, modems, and fax machines; and other small consumer goods such as PDAs, cell phones, phone systems, computer games and other electronic toys, portable CD players, camcorders, and digital cameras.
Mattresses	Mattresses and box springs processed for reclaiming the components including steel, foam, wood, and fibers.
Carpet	Any material consisting mainly of carpet or carpet padding including flooring applications consisting of various natural or synthetic fibers bonded to some type of backing material as well as plastic, foam, felt, and other materials used under carpet to provide insulation and padding.
Florescent Bulbs	Mercury containing bulbs and ballasts recycled.
Other Batteries	Consumer batteries of various sizes and types. Examples include flashlight, small appliance, watch, and hearing aid batteries.
METALS	
Aluminum Products	Any item made of aluminum other than cans or constriction waste including aluminum furniture, tools, and household items.
White Goods / Appliances	Metal appliances including refrigerators and air conditioners (with Freon removed), as well as stoves, water coolers, water heaters, and other small (mostly) metal appliances.
OTHER PLASTIC WASTE	
Mixed Plastics/Other Plastics	Plastic products such as coat hangers, plastic toys and furniture, other non-durable plastics and non-food plastic packaging as well as mixed plastic packaging reported.

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