



Maryland
Department of
the Environment

Maryland Statewide Needs Assessment Overview

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Delivered to Maryland's Packaging EPR Advisory Council



Highlights: Waste Characterization Study

- Included more packaging-specific material categories
- Largest Categories: Organics, Paper
- Changes from 2016 to 2024: C&D decreased from 15% to 8%
Plastics, organics, paper, glass, HHW and other wastes increased

Table 2-1 Unadjusted Statewide Aggregate Disposed MSW Composition

Material Category	Mean	MOE	Tons	Material Category	Mean	MOE	Tons
Paper	26.3%	1.4%	1,186,369	Glass	2.5%	0.4%	111,826
1 Newsprint	0.2%	0.1%	8,443	1 Clear Glass Containers	1.5%	0.3%	67,468
1 Corrugated Cardboard/Kraft Paper	8.7%	0.9%	391,412	1 Brown Glass Containers	0.4%	0.2%	17,430
1 Magazines	0.4%	0.2%	16,698	1 Green Glass Containers	0.4%	0.2%	17,752
1 Paperboard/Packaging	2.1%	0.4%	93,351	4 Non-Container/Other Glass	0.2%	0.1%	9,176
4 Polycoated/Aseptic Pkg	0.3%	0.1%	13,434	Organics	26.5%	2.2%	1,192,591
1 High Grade Office Paper	0.4%	0.2%	19,578	3 Food Waste	18.8%	1.6%	849,756
2 Books	0.1%	0.1%	6,194	3 Grass	0.2%	0.2%	7,403
1 Other Recyclable Paper	1.9%	0.3%	85,962	3 Leaves	2.2%	0.9%	98,779
4 Paper Cups	0.5%	0.1%	23,364	3 Brush, Prunings, and Trimmings	1.3%	0.5%	59,624
3 Compostable Paper	7.7%	0.6%	346,148	4 Other/Non-Compostable Organics	3.9%	0.9%	177,027
4 Non-Recyclable Paper	4.0%	0.5%	181,785	C&D	8.0%	2.6%	362,135
Plastic	17.9%	1.2%	807,435	3 Wood - Clean Lumber	0.2%	1.5%	7,345
1 PET (#1) Bottles/Jars	1.8%	0.2%	80,435	4 Wood - Painted/Treated	1.2%	0.6%	54,458
1 PET (#1) Other	0.5%	0.1%	20,541	2 Wood - Pallets	3.0%	1.2%	134,480
1 HDPE (#2) Bottles - Natural Only	0.4%	0.1%	20,061	4 Non-C&D Wood	0.1%	0.1%	4,725
1 HDPE (#2) Bottles - Colored Only	0.3%	0.1%	12,934	4 Drywall/Gypsum Board	0.2%	0.1%	7,797
1 HDPE (#2) Non-Bottle Containers	0.3%	0.1%	11,700	2 Concrete, Brick, Rock, Other C&D	1.8%	0.7%	79,501
1 PP (#5) Bottles and Containers	1.3%	0.1%	60,534	4 Carpet, Carpet Padding, & Rugs	1.6%	1.4%	73,829
1 PS (#6) Rigid Containers	0.3%	0.1%	13,941	HHW	0.9%	0.2%	42,124
1 #3, #4, #7 Products	0.0%	0.0%	1,928	4 Medical Waste & Sharps	0.3%	0.1%	14,388
4 Compostable Plastic Pkg	0.0%	0.0%	171	2 Batteries - Lead Acid	0.0%	0.0%	18
4 Durable Plastic Products	1.3%	0.3%	57,737	2 Batteries - Other Rechargeable	0.0%	0.0%	1,817
4 EPS "Styrofoam" - Food Pkg	0.2%	0.1%	8,483	2 Batteries - All Other	0.1%	0.0%	2,551
4 EPS "Styrofoam" - Non-Food Pkg	0.1%	0.0%	5,144	2 Other Haz Waste/Other HHW	0.5%	0.2%	23,350
2 Clean Commercial Film	1.9%	0.7%	87,837	Electronics	0.5%	0.2%	20,697
2 Clean Shopping Bags	0.4%	0.1%	17,371	2 Computers & Electronic Products	0.5%	0.2%	20,697
4 Contaminated/Other Film - Mono	5.2%	0.5%	235,805	Other	14.0%	1.5%	632,360
4 Contaminated/Other Film - Multi	1.7%	0.2%	76,513	2 Textiles & Leather Products	3.0%	0.6%	135,226
4 Remainder/Composite Plastic	2.1%	0.4%	96,299	4 Diapers & Sanitary Products	3.9%	0.7%	175,823
Metal	3.4%	0.5%	152,788	4 Bulky Items	3.5%	0.8%	156,083
1 Aluminum Cans & Containers	0.7%	0.1%	33,543	2 Tires	0.1%	0.2%	5,644
2 Other Aluminum	0.4%	0.1%	17,816	4 Other/Not Elsewhere Classified	2.0%	0.5%	89,426
2 Other Non-Ferrous	0.6%	0.2%	28,022	4 Supermix - Bottom Fines & Dirt	1.6%	0.1%	70,158
1 Tin/Steel Containers	0.7%	0.1%	32,909	Total	100.0%		4,508,325
3 Other Ferrous	0.9%	0.5%	40,498	Samples	110		
1 Curbside Recyclables	23.6%		1,064,357	3 Compostables/Mulchables	30.4%		1,369,056
2 Other Non-Curbside Recyclables	13.3%		601,023	4 Not Currently/Widely Recyclable	32.7%		1,473,889



Highlights: PPP Recycling Rates by Sector

Multifamily

16%

Single Family

30%

Commercial

39%

Maryland generated approximately 2.9 million tons of covered PPP in 2022.

- 60% were generated in the commercial sector
- 30% by single-family households
- 10% by multi-family households.



Highlights: Active Recycling Service

Single Family

89%

Multifamily

49%

Active recycling service refers to a household with access to recycling services by either automatically being provided recycling, being required to subscribe to recycling, or voluntarily subscribing to a recycling service.



Highlights: Infrastructure & Capacity

Existing Capacity

Current Processing

439,000 TPY

Maximum Design
Capacity

+ 71,400 TPY

Potential Capacity

Potential Upgrades

+ 190,150 TPY

Transfer Stations: **42** accept recyclables generated in the State.

Organics Processing Facilities: **5** accept compostable packaging, and **2** plan to or would be interested in the future.

Reuse: nearly **57** companies/organizations accept packaging-related materials.



Highlights: Worker Conditions

Collection

Identified Concerns:

- Transportation
- Broken air conditioning in vehicles
- Sparse PPE
- Hot temperatures

In 2023, the solid waste collection injury rate among workers was 4.3 cases per 100 Full Time Equivalent (FTE) employees

Facilities

Identified Concerns:

- Specific materials
- Contamination
- Hand picking materials from conveyor belts



Opportunities for WMBE

- Minority-owned businesses make up **25.4%** of companies in the state¹
- EPR has the potential to create business opportunities in the state and generate additional jobs and may incentivize and expand opportunities for the participation of Minority or Women-owned Business Enterprise (MWBE) organizations in the State.

¹Tierra Williams. October 29th, 2024. Maryland is ranked No.1 in the nation where minority-owned businesses are thriving, [Maryland is ranked No.1 in the nation where minority-owned businesses are thriving - 47abc](#)



Highlights: Equity

- To increase equitable outcomes for recycling in urban versus rural areas, structure recycling programs according to the needs of the community.
- Include accommodations for the elderly in recycling collection and program design, especially in rural areas.
- Translate recycling outreach materials into multiple languages.
- Provide multiple methods of recycling collection to alleviate barriers and increase capture of recyclables.
- Services should be designed to capture economies of scale so that programs and infrastructure do not disproportionately impact low-income areas with limited financial resources.



Economic Opportunities

- The total value of recyclables disposed annually ranges from \$189.1 to \$248.1 million.
- Cardboard (\$75.1 million) and metal packaging (\$64.2 million) are the materials with the most value disposed in landfills.



Highlights: Current and Future State

- A well-designed program could increase the State's recycling rate for Paper and Packaging Products (PPP) from 34% to 50% or greater.
- Benefits under the modelled EPR system include \$202 million of material value captured (an increase of \$53 million from the baseline), a reduction of more than 1 million metric tons of carbon dioxide equivalent (CO₂E), and the creation of 2,075 additional jobs