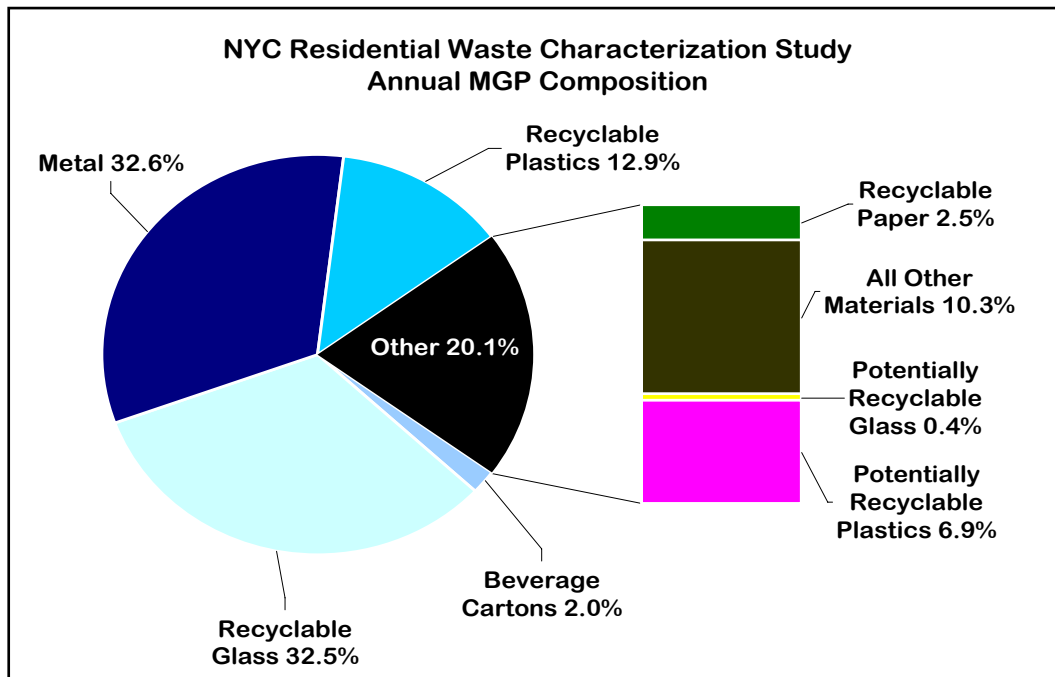


RESIDENTIAL METAL, GLASS, PLASTIC, AND BEVERAGE CARTON (MGP) RECYCLING

MGP is one of two recycling streams that residents are required to separate. MGP properly consists of metal of all types, glass bottles and jars, plastic bottles and jugs, and milk or juice cartons. On average, New Yorkers set out about 4,600 tons of MGP each week for recycling. That's about 2.9 pounds per week for each household.

COMPOSITION

Around 80% of what is set out as MGP consists of properly recycled metal, glass and plastic. The rest is a mixture of non-designated materials, like organics, recyclable paper, as well as other plastics and a small amount of glass not presently designated for recycling. Such glass and plastic, labeled "potentially recyclable" in the chart below, could be recycled if technology and markets develop in the future.



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2004-05 NYC Residential and Street Basket Waste Characterization Study

Roughly equal parts of MGP are metal and glass.¹ Detail is shown at right.

Bulk Metal:

Although cans and small metal items make up most of the metal in the MGP stream, large **bulk** items² make up roughly 10% to 20% of metals in MGP.

Detailed Breakdown of Designated Metal, Glass and Plastic Recyclables in the MGP Stream			
Metal		Designated Glass	
Aluminum Cans	0.65%	Brown Container Glass	1.98%
Aluminum Foil/Containers	0.97%	Clear Container Glass	8.15%
Appliances: Ferrous	5.58%	Green Container Glass	4.13%
Appliances: Non-Ferrous	0.14%	Mixed Cullet	18.05%
Empty Aerosol Cans	0.69%	Other Container Glass	0.18%
Mixed Metals	3.35%	glass subtotal	32.49%
Other Aluminum	0.37%	Designated Plastic	
Other Ferrous	12.81%	HDPE Bottles: Colored	3.27%
Other Non-Ferrous	0.78%	HDPE Bottles: Natural	3.14%
Tin Food Cans	7.25%	PET Bottles	6.46%
metal subtotal	32.58%	plastic subtotal	12.87%

CAPTURE RATE

The "capture" rate measures how much of a material that is designated for recycling is actually making its way into the recycling bin (as opposed to being thrown out improperly as trash). It is calculated as:

$$\frac{\text{tons of recycled material collected}}{\text{total tons of waste (refuse + recycling) collected}}$$

Material Category: Subcategory	% of MGP Stream	% of Waste (Refuse + Recycling) Stream	Weekly Tons Recycled Properly in MGP	Weekly Tons not recycled properly	capture rate
BEVERAGE CARTON TOTAL	1.95%	0.50%	90.0	230.0	28.1%
GLASS TOTAL	32.5%	4.5%	1,497.4	1,277.2	54.0%
Aluminum Cans	0.6%	0.2%	29.7	106.1	21.9%
Aluminum Foil/Containers	1.0%	0.5%	44.5	302.3	12.8%
Other Aluminum	0.4%	0.1%	17.1	20.4	45.7%
Other Non-Ferrous	0.8%	0.2%	35.9	70.8	33.6%
Tin Food Cans	7.3%	1.2%	334.1	440.9	43.1%
Empty Aerosol Cans	0.7%	0.2%	31.7	70.2	31.1%
Other Ferrous	12.8%	1.9%	590.4	664.3	47.1%
Mixed Metals	3.3%	0.7%	154.2	267.3	36.6%
Appliances: Ferrous	5.5%	0.7%	255.0	205.3	55.4%
Appliances: Non-Ferrous	0.1%	0.0%	6.5	16.1	28.7%
METAL TOTAL	32.5%		1,499.1	2,163.7	40.9%
PET Bottles	6.5%	1.2%	297.6	481.9	38.2%
HDPE Bottles: Natural	3.1%	0.5%	144.9	149.2	49.3%
HDPE Bottles: Colored	3.3%	0.5%	150.7	158.7	48.7%
PLASTIC TOTAL	12.9%		593.2	789.7	42.9%

The overall capture rate for MGP is nearly 57% citywide. In other words, out of all the metal, glass, plastics, and beverage cartons that residents throw out, they are recycling about 57% correctly, on a citywide, annual basis.

There are many different types of metal and glass/plastic/carton containers that DSNY asks residents to recycle. Which have the best, and the worst capture rates? The chart at left compares material categories of MGP in terms of how much is properly recycled; and how much is not. Overall the highest

capture rates are for ferrous appliances and glass, while the lowest rates are 13% for aluminum foil and non-can aluminum containers.

¹ As with all data in the WCS, this refers to weight, not volume.

² "Bulk" is defined as items too large to fit in a 90-gallon container.

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But this doesn't tell the full story, because both ferrous metal appliances and aluminum foil and containers are present in relatively less amounts in the waste stream than other categories, such as glass or ferrous metal objects (both bulk and non-bulk ferrous items other than appliances). If we assess which categories of MGP are making up most of the MGP incorrectly disposed of in the trash, we find that "other ferrous" constitutes the greatest tonnage. It would therefore make sense to target this category in public education to encourage more MGP recycling.

Finally, a word about net and gross capture rates. The 57% overall capture rate is a gross capture rate calculated as the total weight of MGP collections, divided by the fraction of the total waste stream that is MGP. This method is consistent with past DSNY capture rate calculation methodologies, as well as methodologies used in other jurisdictions, to assess weekly or monthly capture rates based on fluctuating collected tonnages. The capture rates for individual material categories, or material groups, are calculated based on the estimated fraction of each category in the MGP stream, and the waste stream. These are net capture rates. They will not necessarily average to the total gross capture rate, depending on collections at any particular time.

As you read on:

You can find the details on the breakdown of MGP in each borough, in each season, and in each housing density and income strata in the various tables of the WCS Final Report. See "Where and How To Start Using the Study" for pointers about where to start.

Bear in mind that what was studied as "MGP" in the WCS was what was set out at curbside as MGP recycling. The 2004-05 NYC Waste Characterization Study examined the composition of the overall waste stream (refuse + recycling) in order to demonstrate how much designated metal, glass, plastic, and beverage cartons are "out there" in total, whether in the trash or in the recycling.

Finally, neither the MGP data nor the waste data - or in fact any data in the WCS - quantify any materials specifically redeemed under the **NY State bottle bill**.¹

¹ Details on the New York State Bottle Bill, also known as the Returnable Container Act, can be found at <http://www.dec.state.ny.us/website/dshm/redrecy/rcacont.htm>

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