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One New York

The Plan for a Strong
and Just City



VISION 3: Sustainability ↓

GOAL 2

New York City will send zero
waste to landfills by 2030.



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Expand the NYC **organics program** to serve all New Yorkers by the end of 2018.

Make all schools **Zero Waste Schools**.



Reduce the use of **plastic bags** and other non-compostable waste.

Give every New Yorker the opportunity to recycle and reduce waste, including at **NYCHA housing**.



Enhance **curbside recycling** program.

Expand opportunities to reuse and recycle **textiles and electronic waste**.



Develop a **Save-As-You-Throw** program to reduce waste.



Reduce **commercial waste disposal** by 90% by 2030.

Getting to Zero

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NYC: Weight of Waste

New York City produces **6 million tons of garbage** per year.



Plastics carried by barge to a Brooklyn recycling plant.

Source:

https://www.washingtonpost.com/graphics/2017/world/global-waste/?hpid=hp_hp-visual-stories-desktop_no-name%3Ahomepage%2Fstory&utm_term=.ad598af0fdce#newyork

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115,000
TONS/WEEK!

16%

diversion rate*
in 2016

100%

diversion rate*
goal by 2030



*diversion rate (n.)

the percentage of waste diverted from traditional disposal (i.e., landfilling, incineration) to be recycled, composted, or re-used

Trash Journey & Impact

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COLLECTION

Picking Up

Every day, more than 6,000 men and women of the Department of Sanitation collect garbage from residences and public buildings in New York City.



They work in pairs and collect more than 10,000 tons of material* every day. All that waste goes into the back of compactor trucks.



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TRANSFER

When trucks are full, they head to one of the city's transfer stations—except for Manhattan residents' waste, which goes to an incinerator or transfer stations in New Jersey*.

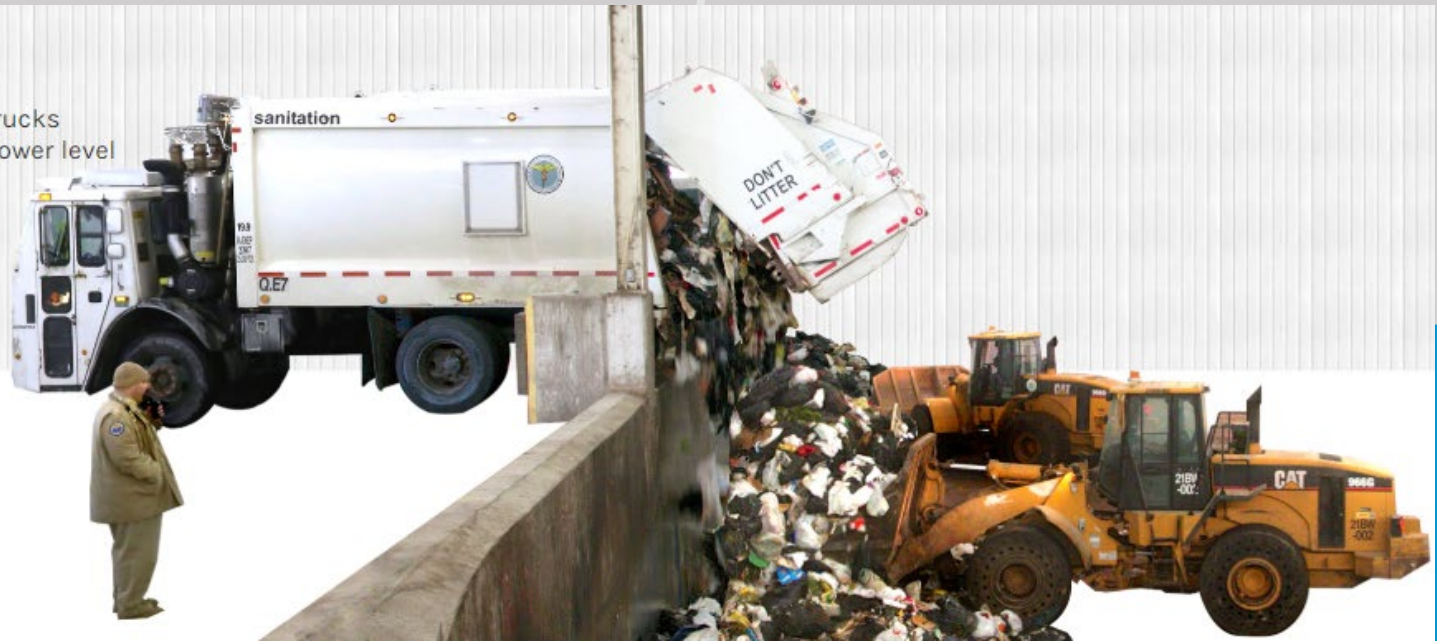


Arriving at a Transfer Station

Transfer stations are consolidation centers for waste. They combine material from several collection trucks into containers.

Tipping

Inside the transfer station, trucks unload their content onto a lower level known as the "tipping floor".



Loading for Transportation

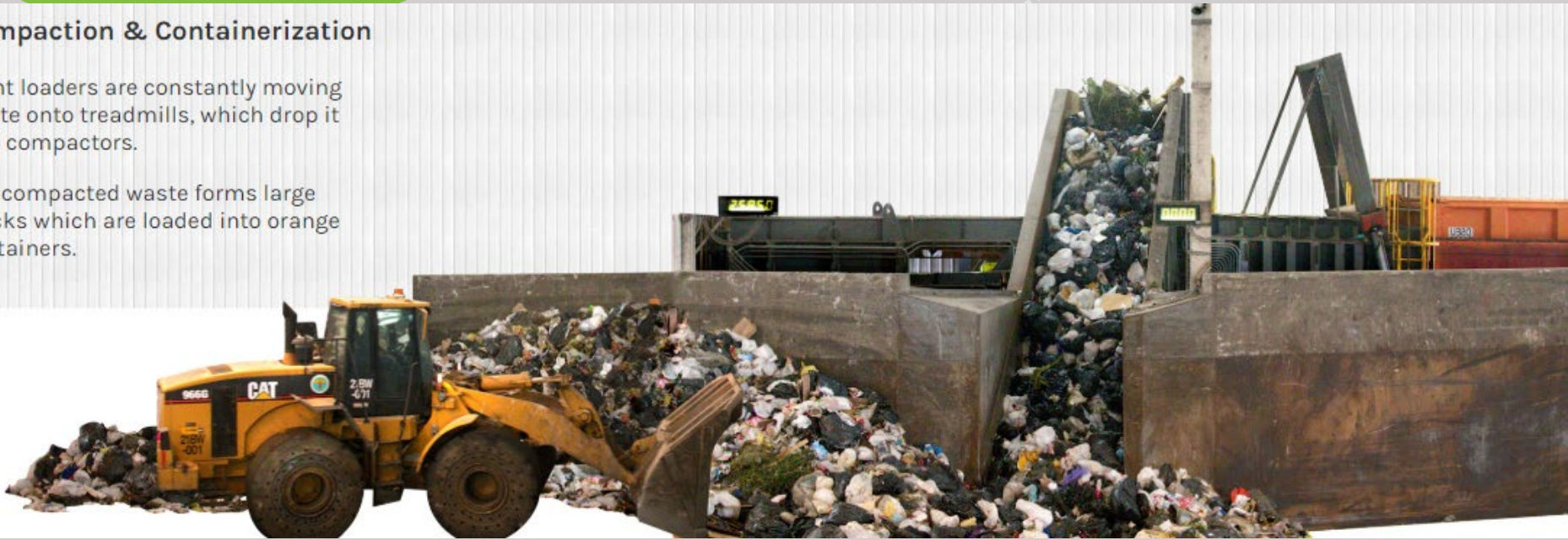
After leaving the transfer station, waste containers are loaded on trucks or trains for long-distance transport.



Compaction & Containerization

Front loaders are constantly moving waste onto treadmills, which drop it into compactors.

The compacted waste forms large blocks which are loaded into orange containers.



NEXT STOP: Landfills



2001

The closure of Fresh Kills

In 1996, the City pledged to close Fresh Kills landfill in five years, due to intense community pressure



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Sending it "Away"

Waste is transported on trains or trailer trucks, mostly to landfills.

It travels to other cities and states, located from 70 up to 600 miles away*.

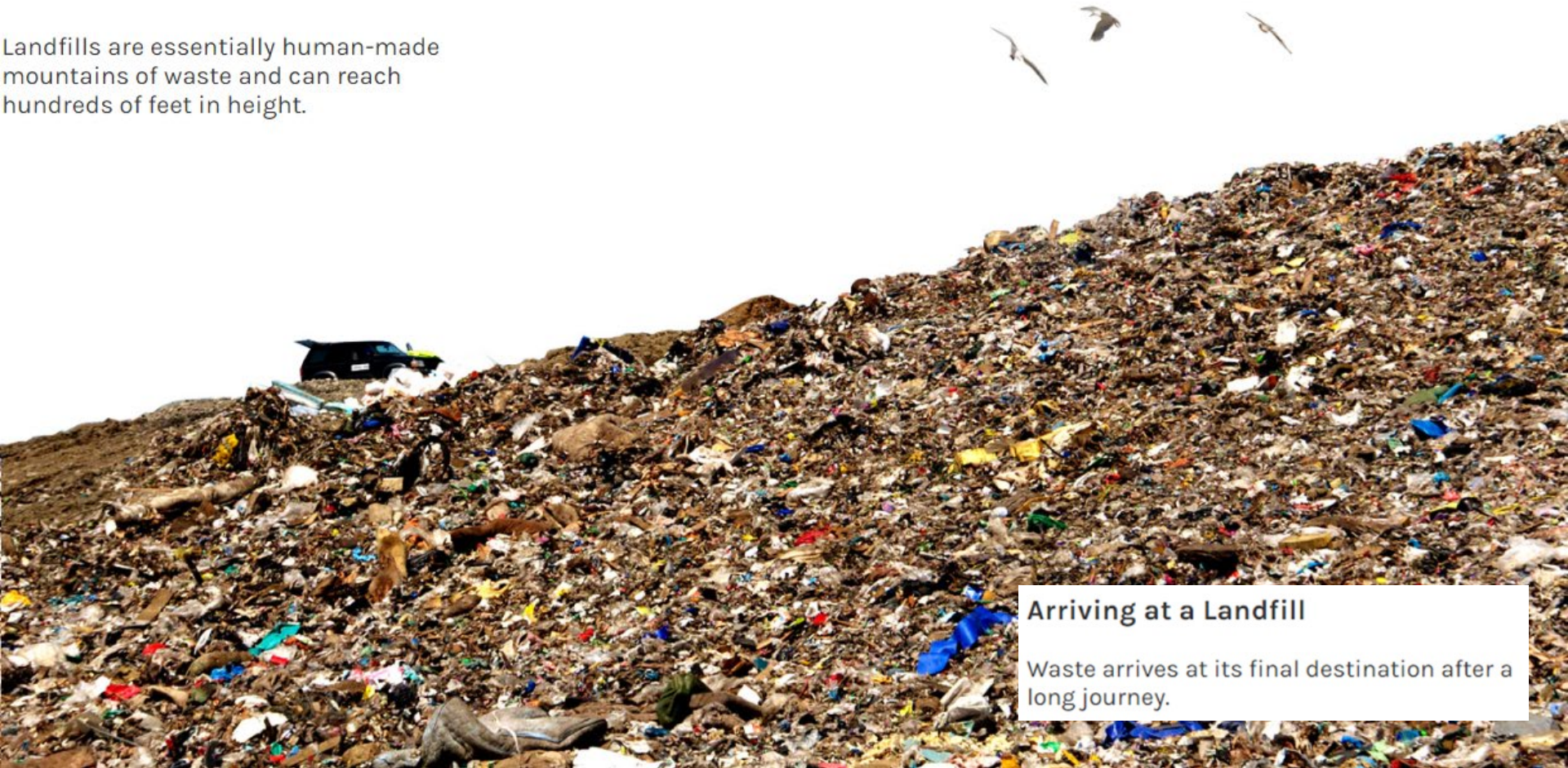


**Exporting waste
costs NYC
close to \$400
million/year**





Landfills are essentially human-made mountains of waste and can reach hundreds of feet in height.



Arriving at a Landfill
Waste arrives at its final destination after a long journey.

**METHANE GAS
RELEASED**



LEACHATE

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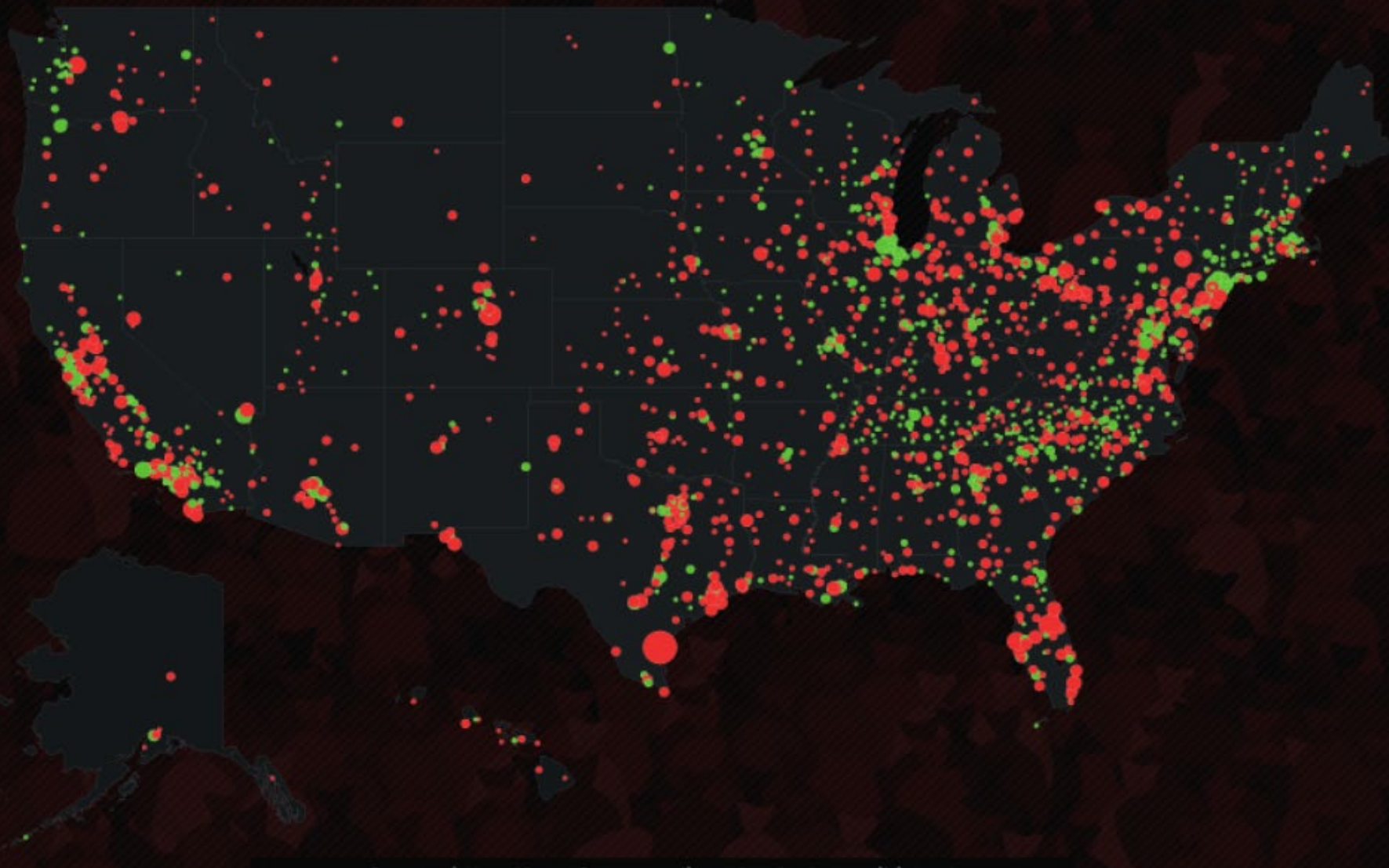
A CENTURY OF AMERICAN GARBAGE

LANDFILLS OVER TIME, BY SIZE AND CURRENT STATUS

2013

LANDFILL STATUS

● Open ● Closed



Source: <https://www3.epa.gov/lmop/projects-candidates/>



350



500



1000



A million years??





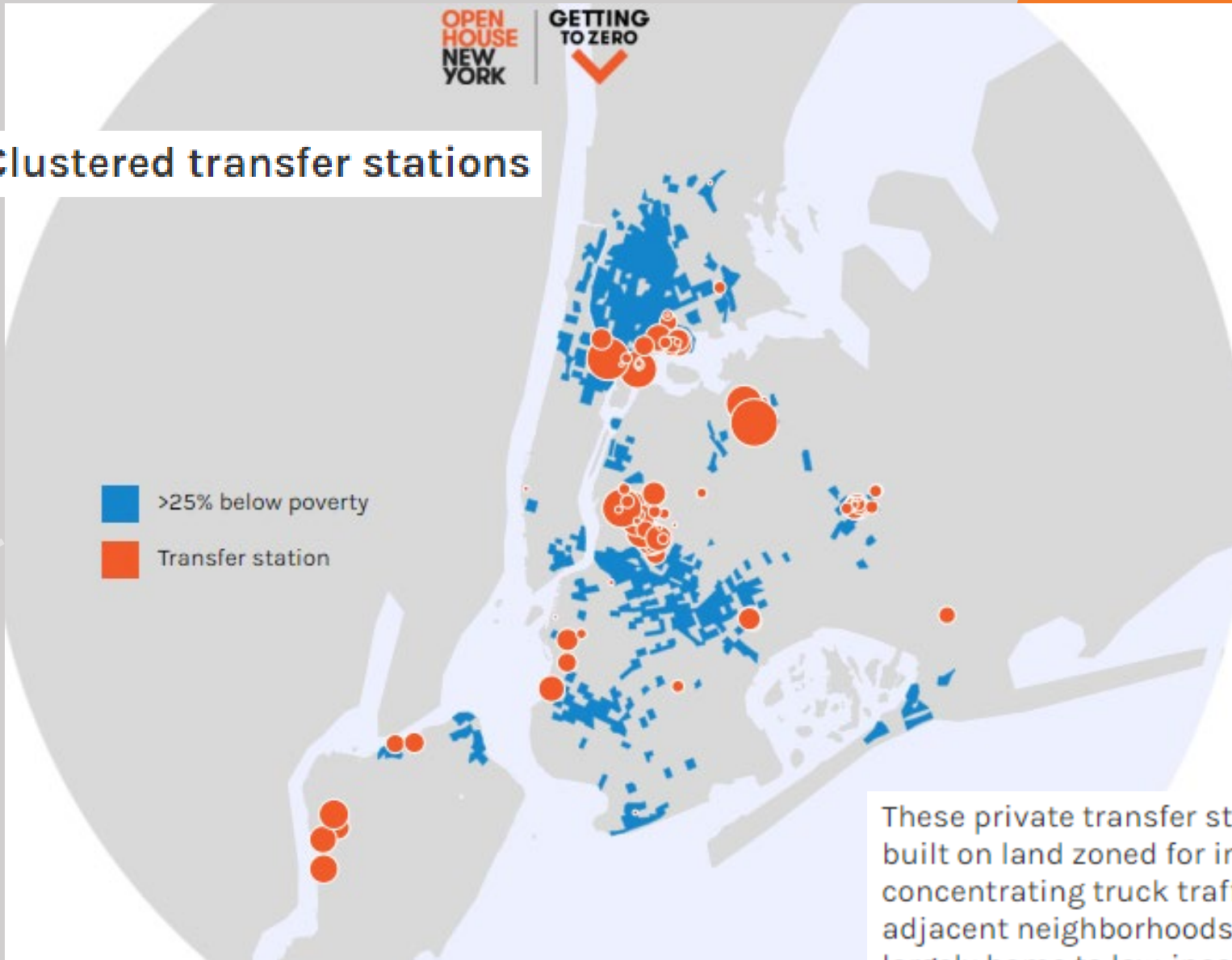
Over 70% of NYC's waste passes through 3 neighborhoods:

South Bronx
North Brooklyn
SE Queens



Clustered transfer stations

-  >25% below poverty
-  Transfer station



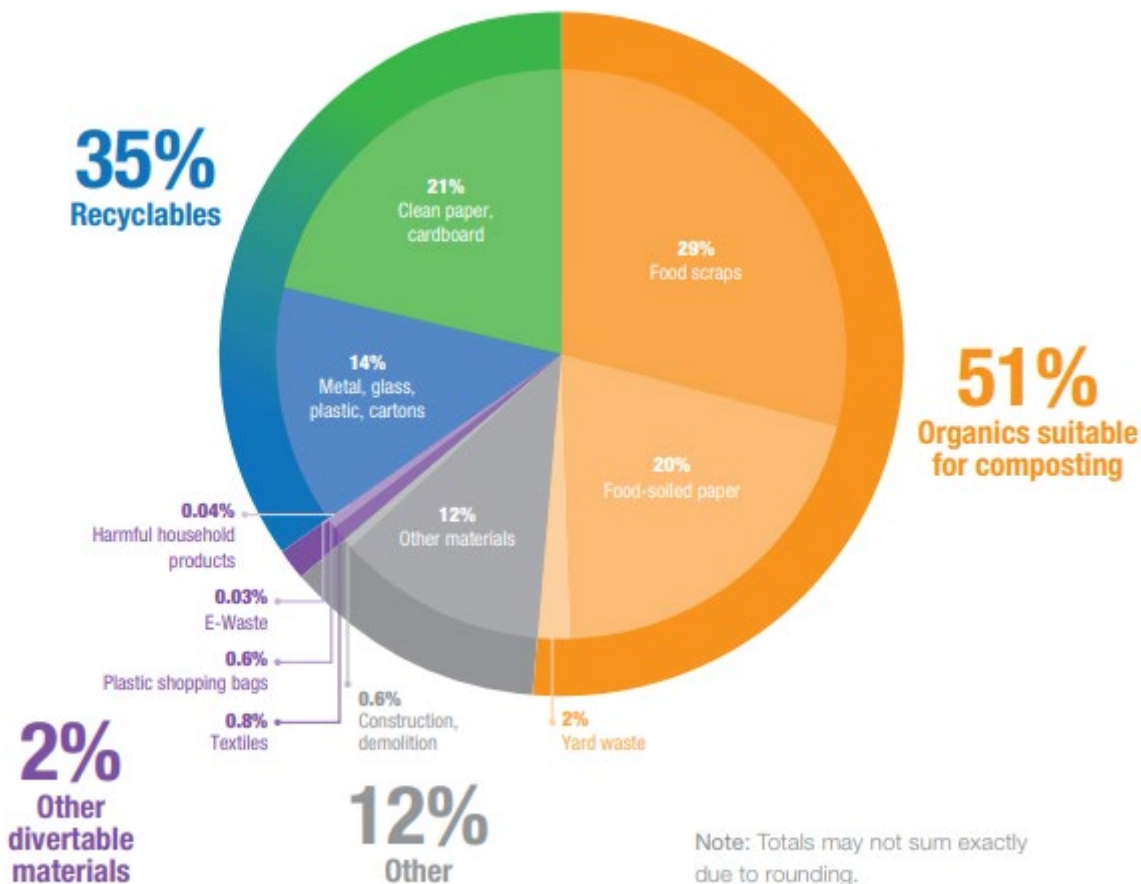
These private transfer stations were built on land zoned for industrial use, concentrating truck traffic in the adjacent neighborhoods, which are largely home to low-income communities and communities of color.

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Schools have the potential to divert as much as 86% of their waste for recycling or composting through DSNY curbside collections.

2017 Composition of Schools Aggregate Discards



So...why
YOU?

Why
schools?



= HUGE IMPACT!

Recycling 101

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Sort It Out!



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Green Bin Don'ts



Blue Bin Don'ts



What Goes in My Trash Bin?

Soft Plastics

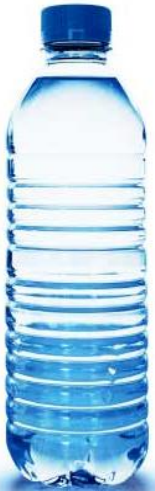
Chip Bags

Plastic Wrappers





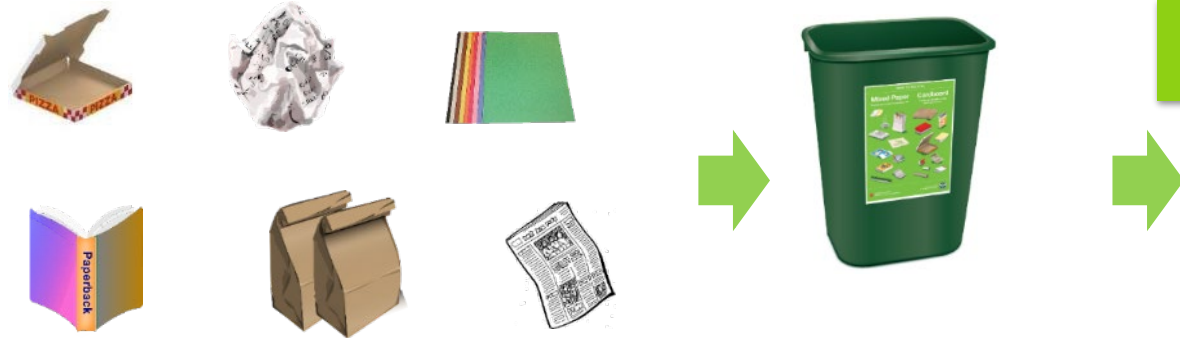
**NO RECYCLABLES IN
THE TRASH BIN**



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Recycling can create up to 7x more jobs than sending waste to landfills.



Benefits: Jobs

SIMS Municipal Recycling (BK)



Pratt Industries (S.I.)



Composting Facilities (near NYC)



Green Bin Journey

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What Goes in My Green Recycling Bin?

Mixed Paper

Cardboard



Recycling (half of the) paper in New York City*

About half of the paper collected by DSNY is recycled in the city, at the Pratt Paper Mill on Staten Island.*

The paper is taken there from Manhattan by barge, or from Staten Island and South Brooklyn by collection trucks.



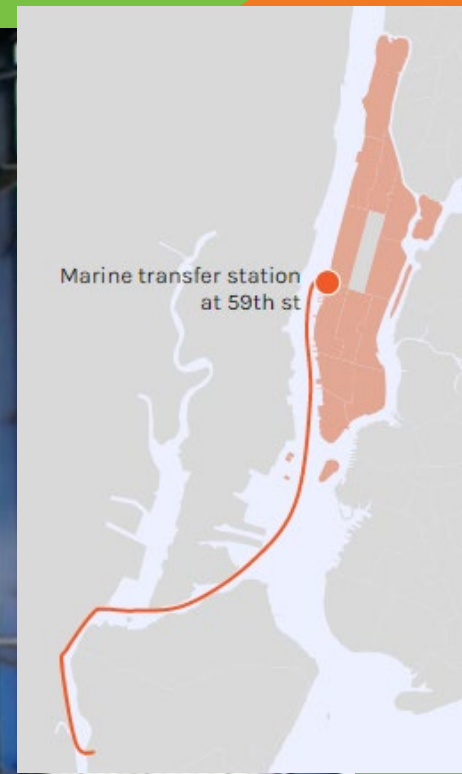
● Pratt paper mill



Transferring the paper to barges

Paper collected in Manhattan arrives by truck at the marine transfer station at 59th Street on the Hudson River.

There, it is tipped into barges that will make the trip to the paper mill on Staten Island.



Corrugation and manufacturing



From waste to product

Processing the paper in Staten Island

The paper is unloaded from barges by a crane and then loaded into the paper mill's production line. Paper arriving on trucks will go through the same process.



Blue Bin Journey

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What Goes in My Blue Recycling Bin?

Metal

Rigid Plastics

Glass

Cartons



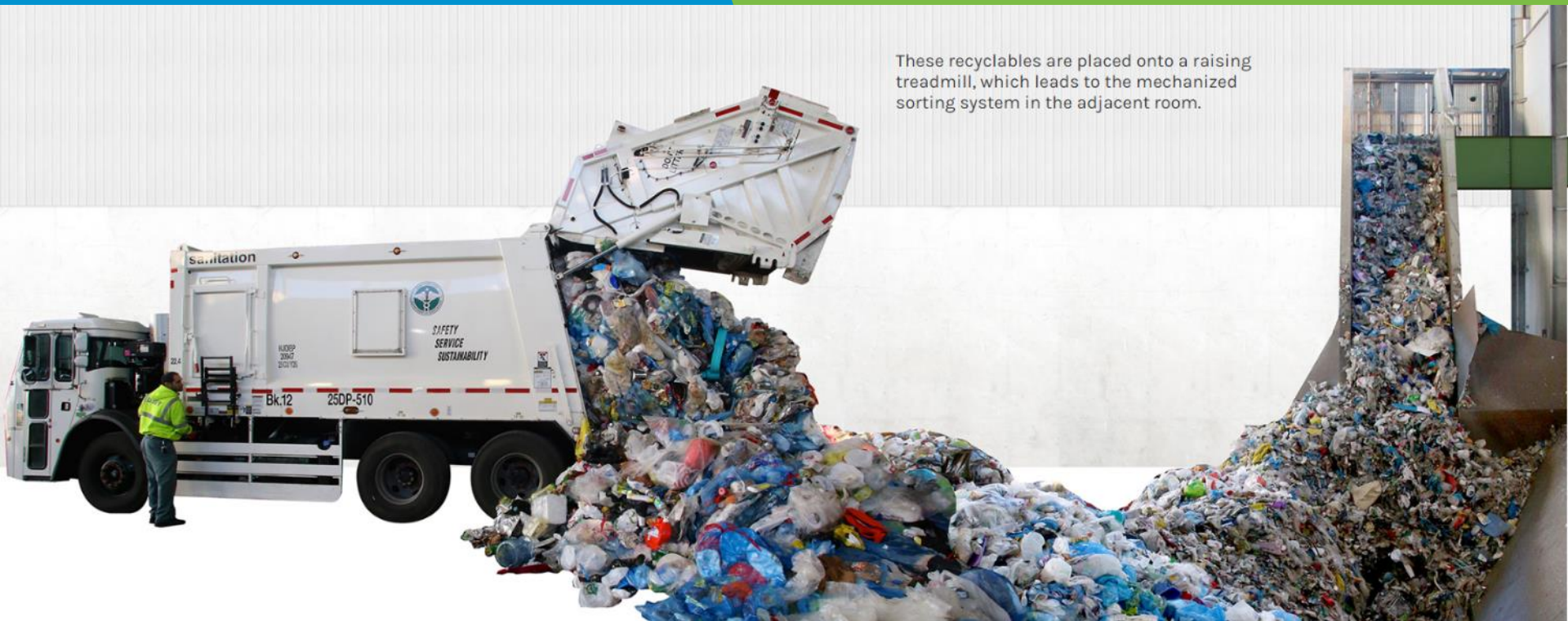
Arriving at the Sims Material Recovery Facility in Brooklyn



Metal, glass, and plastic

The other part of DSNY's recyclables, composed of mixed metal, glass, and plastic, are tipped on an opposite corner of the facility for further sorting.

These recyclables are placed onto a raising treadmill, which leads to the mechanized sorting system in the adjacent room.



Mechanized sorting

Metals are recovered with magnets and electrical currents; several mechanical processes separate glass, plastic film and paper. The remaining plastics go through optical sorters that separate them by chemical composition.

OPEN
HOUSE
NEW
YORK

GETTING
TO ZERO




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The result: sorted bales

The end product of this sorting system are different bales, each containing a specific type of material.

Here, bales of hard plastics are being transported to storage by a forklift.



Brown Bin Journey

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What Goes in My Brown Organics Bin?

All Food Scraps

Compostable Trays

Napkins

Food-soiled Paper

About one third of New York City's residential waste is comprised of organic material.

● McEnroe Farm, NY

Alternatives to landfilling

- Composting facility
- Anaerobic digester

● Newtown Creek Wastewater Treatment Plant, NYC

● Staten Island Compost Facility, NYC



Arriving at the Staten Island Composting Facility



Composting the organics

After being unloaded from collection trucks, organics are mixed with woodchips and arranged in long rows, called windrows.



Compost made from local organics

The resulting compost is donated by DSNY for local use in gardening, public greening, soil mitigation, and street tree stewardship.

From food scraps to food

The produced compost is often used in local community gardens and farms, helping turn food scraps into food again.



School Recycling Systems

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Bins and Signage

Cafeteria



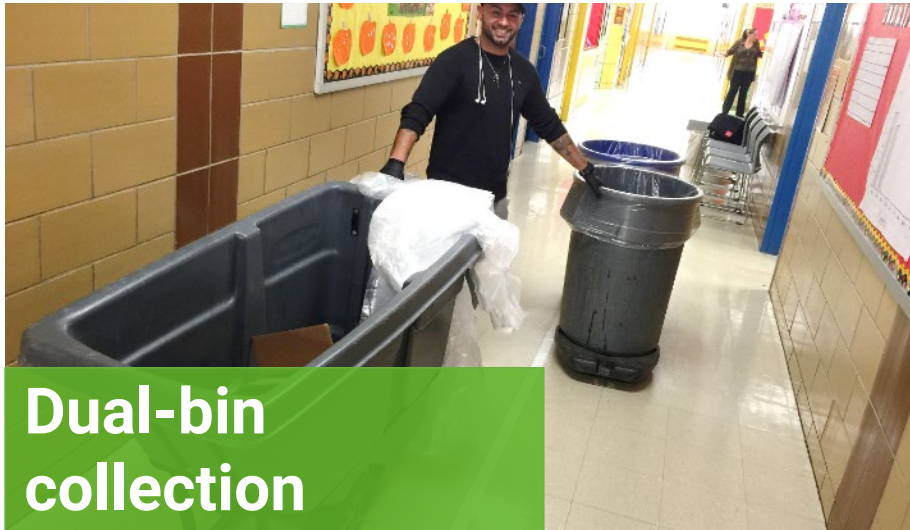
Classrooms and Offices



Hallways and Shared Spaces



Collection, Storage, Set-out, Trainings



Dual-bin collection



Designated storage space



















Curbside set-out



Custodial Staff Trainings

DOE Building Code: M470 Address: 145 W 84 ST, 10024

MATERIAL TYPE	INSTRUCTIONS	SET OUT TIME	COLLECTION TIMES BEGINNING @4PM					
			MON	TUE	WED	THU	FRI	SAT
Organics 	In latched organics bins	After 2pm but before 4pm	 ORGANICS	 ORGANICS	 ORGANICS	 ORGANICS	 ORGANICS	
Mixed Paper Cardboard 	In clear bags or bundles	After 2pm but before 4pm	 MIXED PAPER/ CARDBOARD RECYCLING		 MIXED PAPER/ CARDBOARD RECYCLING		 MIXED PAPER/ CARDBOARD RECYCLING	
Cartons Hard Plastic Glass 	In clear bags	After 2pm but before 4pm		 METAL/GLASS/ PLASTIC/ CARTONS RECYCLING		 METAL/GLASS/ PLASTIC/ CARTONS RECYCLING		
Trash 	In clear bags	Between 4pm and 12 Midnight the day before*	 GARBAGE		 GARBAGE			

*Confirm your school's trash collection schedule at: nyc.gov/dsny.

Enter your building address under "Collection Schedule."

Follow your set out schedule. Report any missed collections to your local DSNY Garage.

Please note: Material set out after your school has been serviced is not a missed collection.

If you have dumpster or compactor service, your schedule may be different.



Research & Data

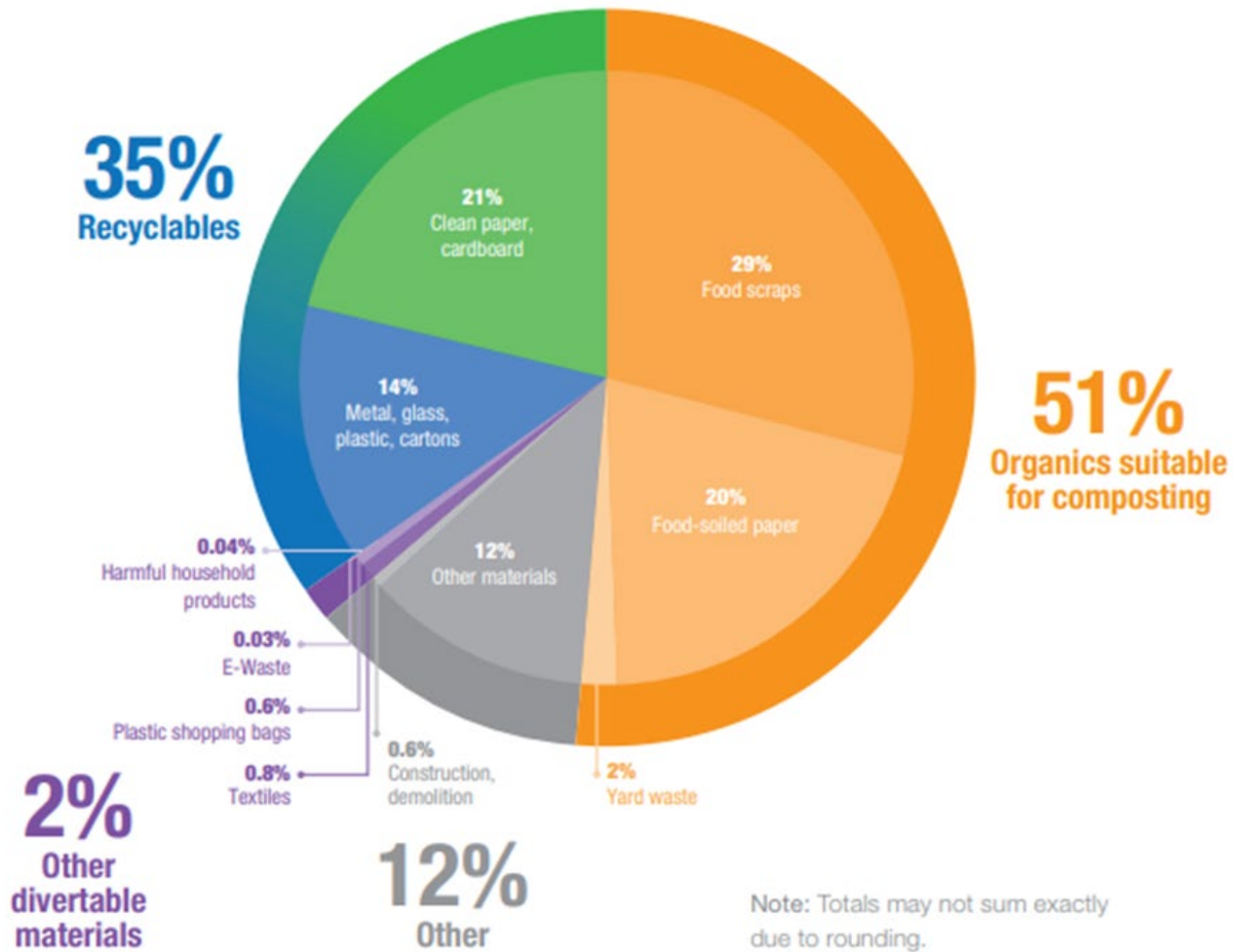
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2017 NYC Residential, School, and NYCHA Waste Characterization Study



2017 Composition of Schools Aggregate Discards





Recycling Achievement

The charts below show the average recycling achievement of NYC schools in 2017. Some schools capture significantly more recyclables and have lower contamination of unwanted materials in recycling collections than others, but the 2017 Study documented that, on average, there is considerable potential to recycle more from school waste.

School Recycling Collections	Paper Recycling	MGP Recycling
Capture Rate	57.9%	19.4%
Contamination Rate	17.2%	40.6%

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Year Three Report

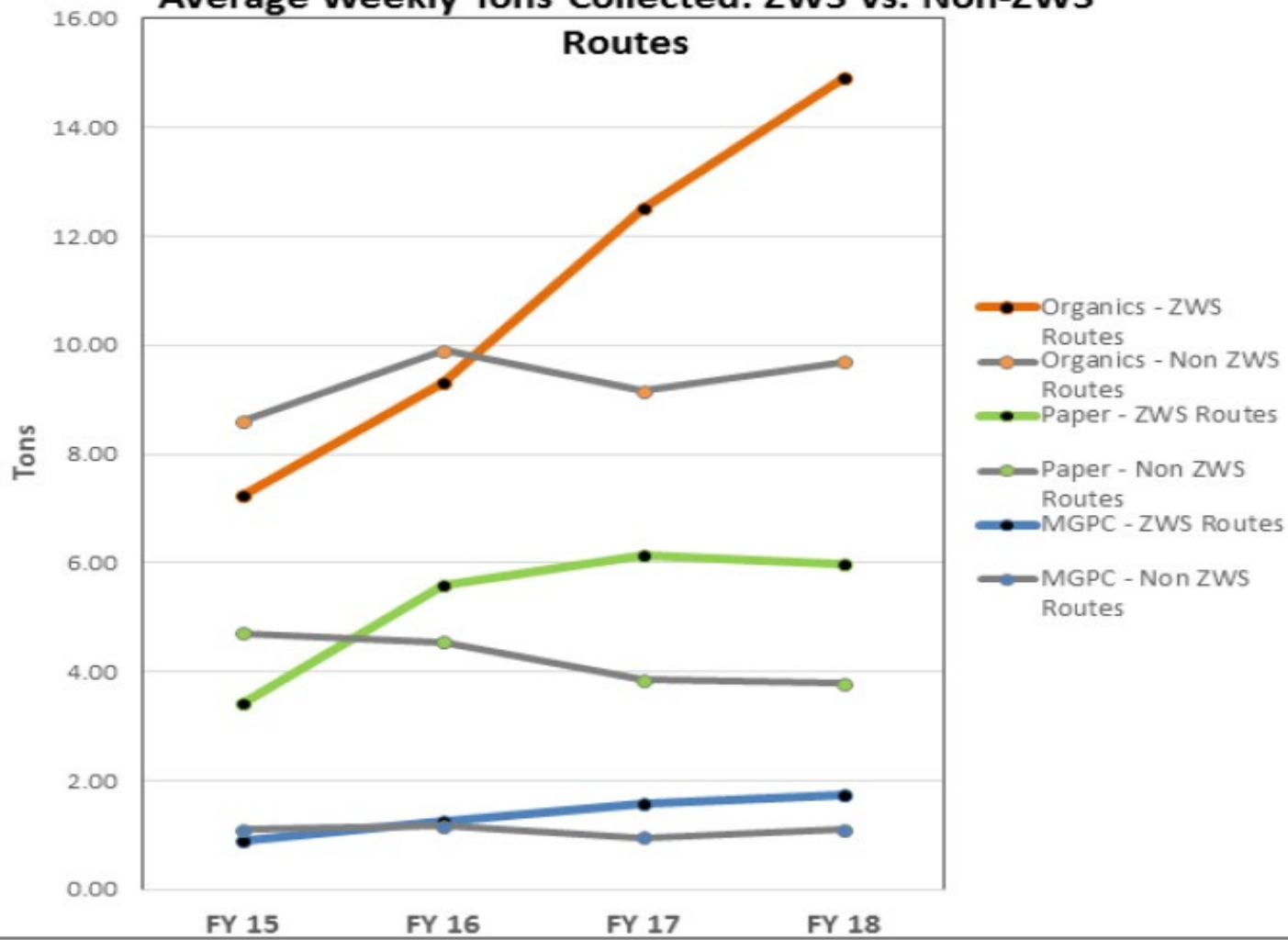
September 2018



Zero Waste Schools Report: Year 3

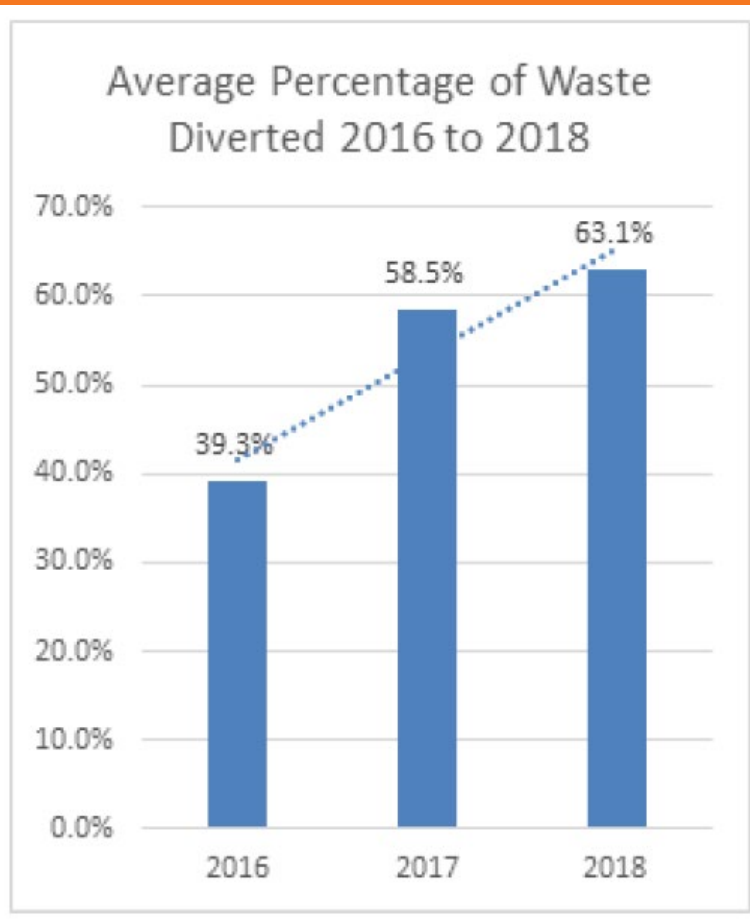
Average Weekly Tons Collected: ZWS vs. Non-ZWS

Routes



DOE-RCP's Curbside Waste Audit Snapshot

During the spring of each programmatic year, DOE and RCP outreach staff collected weights of all curbside recycling and trash bags for one week to take a snapshot of school waste diversion at ZWS. 15 buildings were chosen as representative sample. The analysis of the data recorded at these 15 buildings shed light on the amount of waste and recycling produced by each school building.



The table and graph shown left depict the average percentage of waste that was diverted away from landfills. There has been a positive trend with time. In 2016, 39.3% of all waste were materials that went to recycling (Paper, MGPC, and Organics) facilities instead of landfills. Comparatively, this increased to 58.5% in spring of 2017 and 63.1% in spring of 2018.

