



CITY OF
CAMBRIDGE

THE CAMBRIDGE
DEPARTMENT
OF PUBLIC
WORKS

Zero Waste Master Plan Update

October 22, 2024



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Agenda

Introductions

Update on ZWMP 1.0

Data – Status of Waste

Strategies for ZWMP 2.0



City of Cambridge Zero Waste Goals

- Established in 2009 (2008 is our baseline):
 - 30% reduction by 2020 ✓
 - 50% reduction by 2030
 - 80% reduction by 2050
- Zero Waste Master Plan 2.0 (2025-2030) will create blueprint to meet 2030 goal.
- ZWMP 3.0: 2030-2035

DPW staff, volunteers and Recycling Advisory Committee members celebrating 5 years of citywide curbside compost



ZWMP 1.0 accomplishments

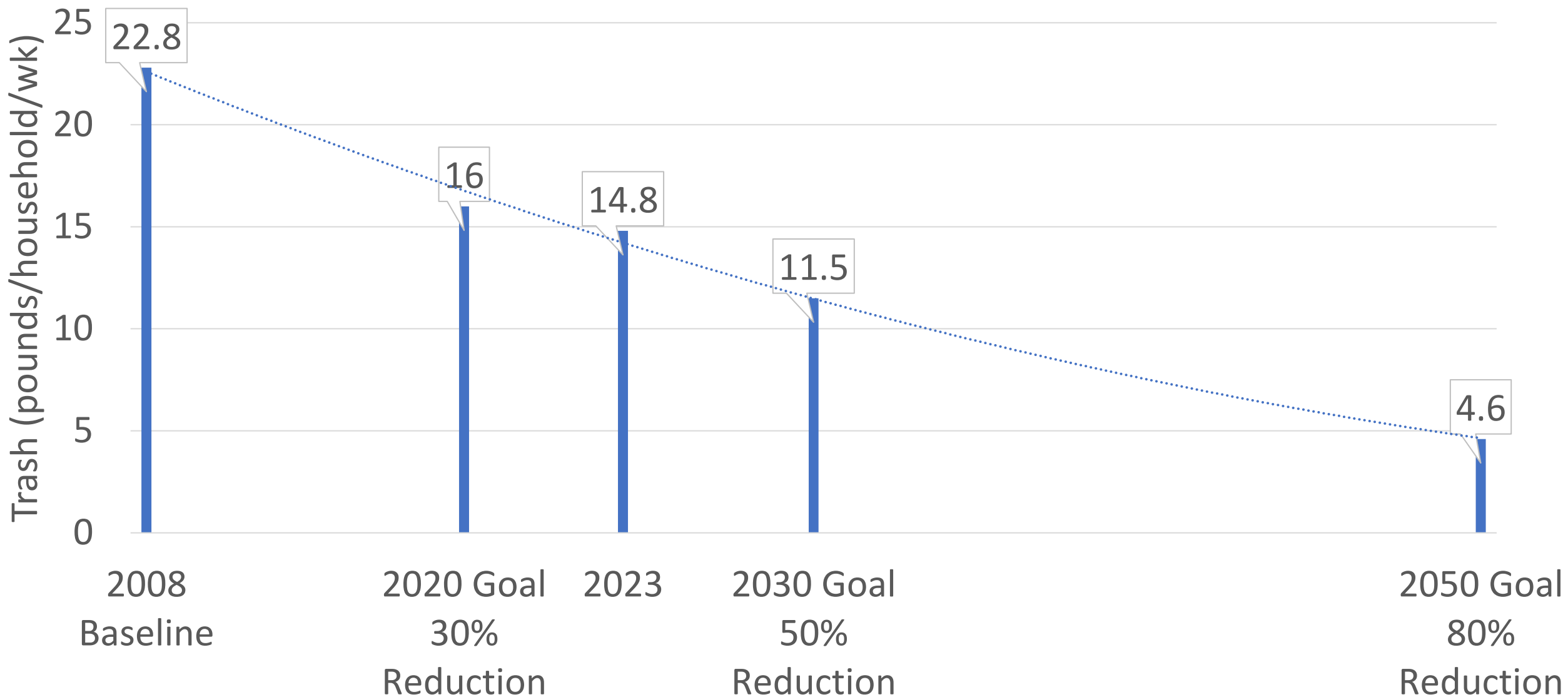
- ✓ Expand **Curbside Compost** access to all residential buildings and small food establishments
- ✓ Extend **Yard Waste Collection** by 2 weeks (thru Dec. 31)
- ✓ Improve Recycling with **Recycle Right** campaign
- ✓ Begin **Small Business Recycle Program**
- ✓ Begin **Mattress Recycling Program**
- ✓ Start **Textiles Recovery** program
- ✓ Launch **Standard Trash Carts**



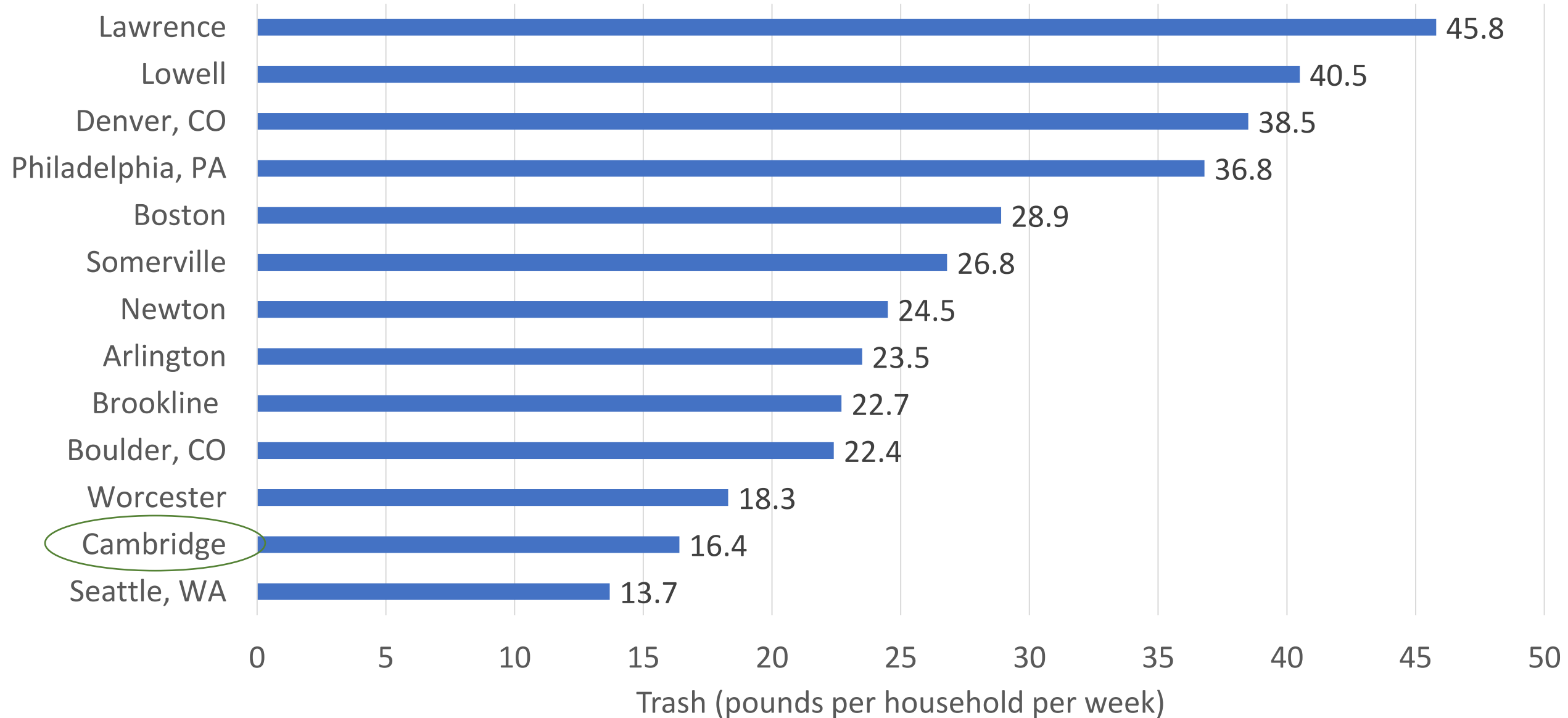
Data Collection for ZWMP 2.0



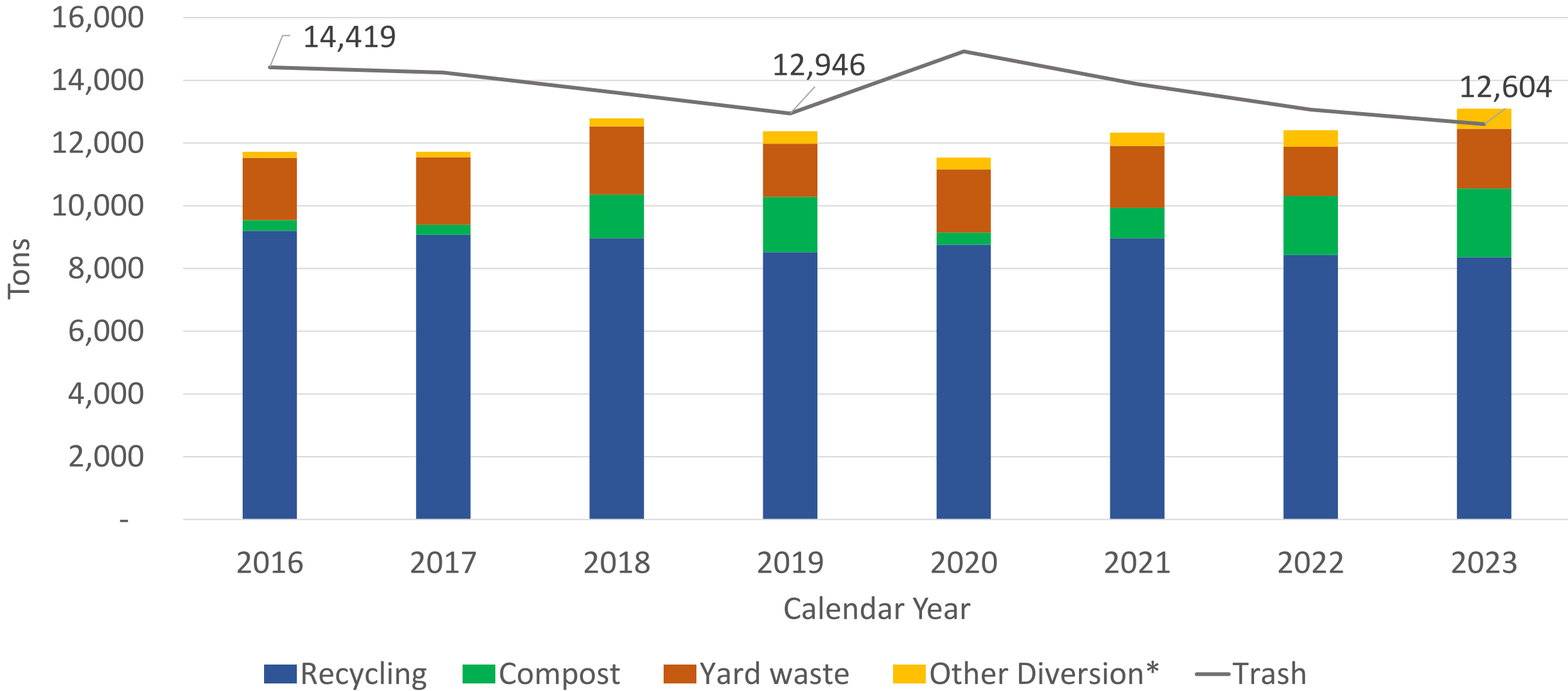
Cambridge Trash Goals



Average Household Trash Generation of MA and US peer municipalities (2021)



Residential Waste Collected by Calendar Year

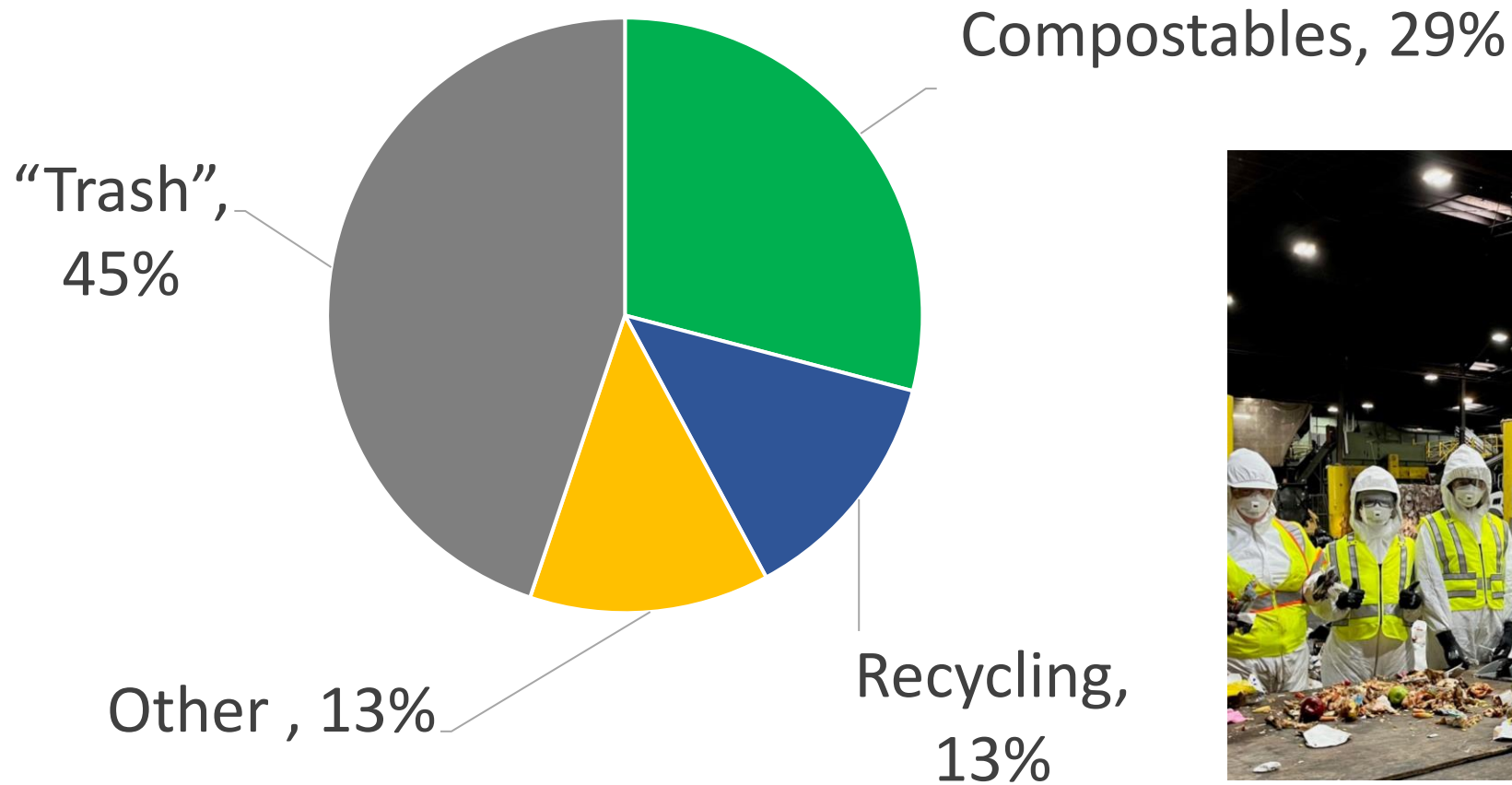


*Other Diversion= E-waste, metal, mattresses, and textiles.



What is in Cambridge's Trash?

2022 Waste Characterization Study

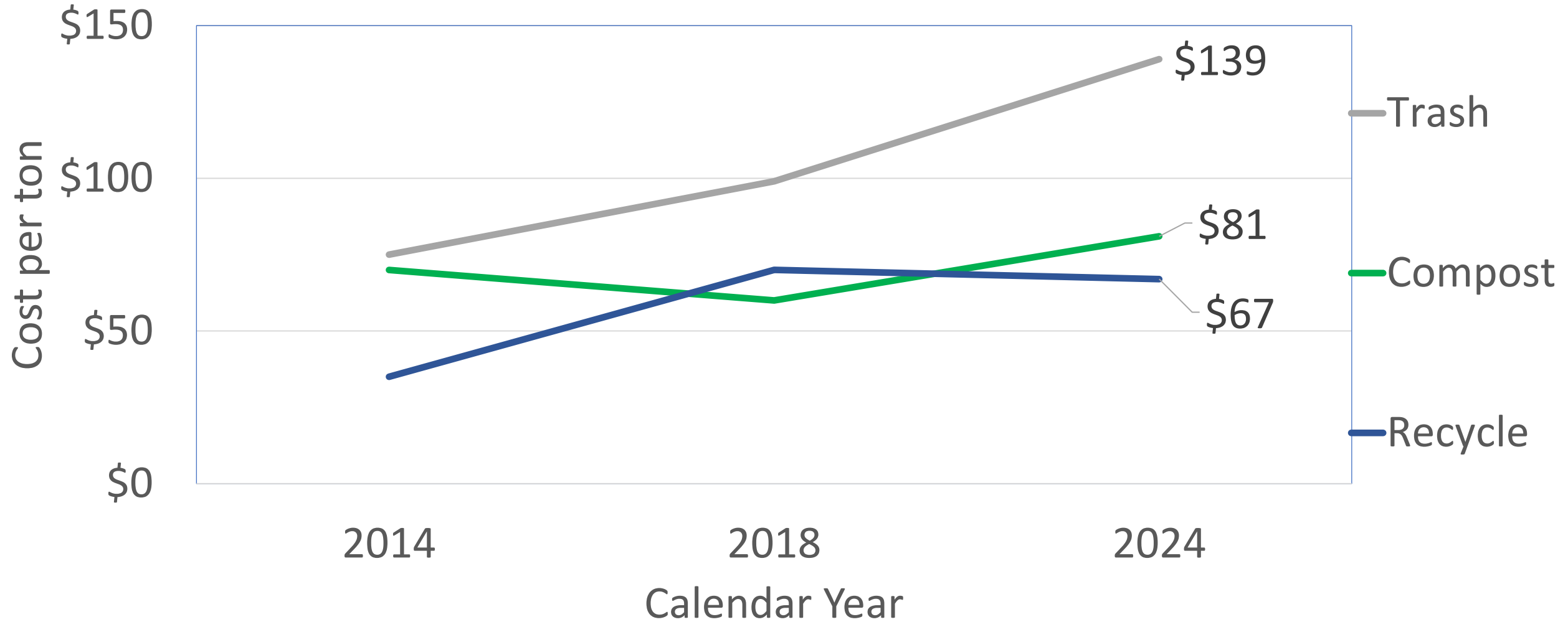


Other = Textiles, Metal, and E-waste

Source: DPW



Disposal Fees for Cambridge Waste



- Recycling has variable price based on market conditions.
- Costs don't include collection expenses.

Source: DPW



Value of Recyclables

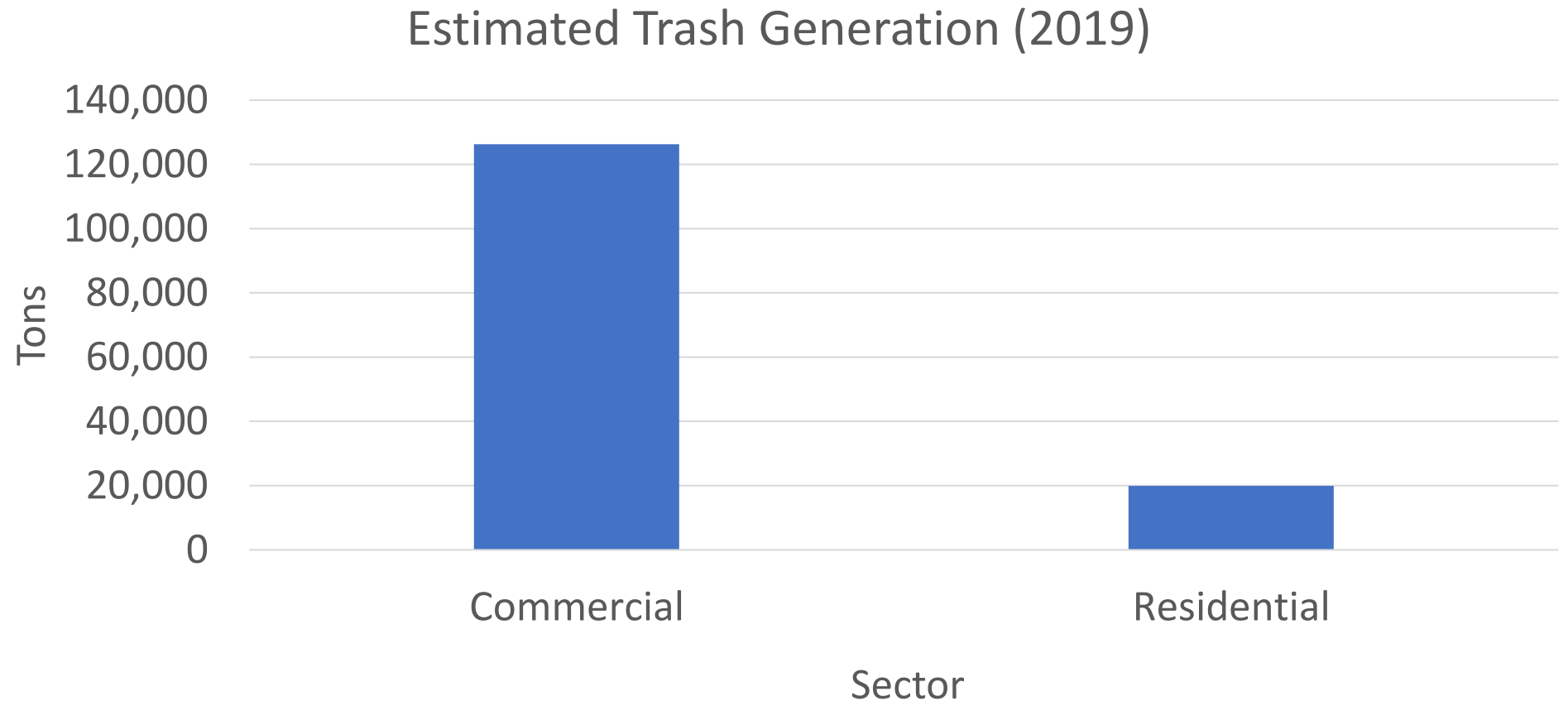
Commodity	Est. Percent of Recycling	Approximate Value (\$/ton)	Examples
Papers	61%	\$90	Cardboard, white paper, newspaper
Glass	26%	-\$60	Glass bottles, jars
Plastic #1	7%	\$400	Water/soda bottles
Plastic #2	2%	\$500	Milk jugs, detergent bottles
Aluminum	1%	\$1,900	Soda/beer cans
Steel cans	1%	\$200	Canned food/soup cans
Plastic #5	1%	\$140	Yogurt cups
Bulky Plastics	1%	\$10	Milk crates, laundry basket, broken waste carts

Source: DPW & Casella



Citywide Waste Generation in Cambridge

We estimate the following trash disposal volume in the residential and commercial sectors:



Source: CalRecycle, CDM Smith analysis for City of Cambridge (2022)



Trash Disposal Concerns for New England

- MA has **highest trash disposal cost** of all states.
- **Limited disposal capacity** → more exporting
 - 2014: 700K tons exported out of state.
 - 2020: 2.2M tons were exported.
- Nearby States have limited capacity:
 - CT exports 40% of their trash
 - ME has banned out-of-state trash

In 2023, all regions of US saw *decrease* in trash disposal costs, except the **Northeast** which saw a **10% increase in disposal costs**



Aprx 33% of Cambridge's trash is incinerated in MA
Aprx 67% of Cambridge's trash is exported to landfill in NH or VA



Zero Waste Master Plan 2.0



Zero Waste Master Plan 2.0 Process

- **Resource Recycling Systems (RRS)** hired to provide consultant services and analyze current programs
- Conduct staff interviews, **engage with residents**, study peer communities, **collect data**, and understand **market conditions** to develop **9 short- and medium-term DRAFT strategies**.
- Final Zero Waste Master Plan 2.0 will include **additional strategies**.



Outreach

- **Kick-Off event** at King-Open on June 12
- Resident **Survey**
- **Meetings:**
 - Inspectional Services Dept
 - Economic Opportunity Division
 - University Staff
 - Property Managers
 - Other stakeholders (contractors, DPW staff, Recycling Advisory Committee)



Draft Short-Term Strategies (1-3 years)

1. Require Property Managers to submit annual **Solid Waste Management Plans**
2. **Mandatory Food Waste Diversion** for all residential and commercial buildings
3. Pilot methods to **reduce move-out trash**
4. **Reduce single-use** serviceware from Food Establishments
5. Improve location and ease of use of **Recycle Center**



Strategy #1: Property Manager Solid Waste Plans

- Plans can help ensure compliance with City regulations in **commercial and residential buildings**
- Increased **communication** between City and Property Managers for better compliance, improved sanitation and rodent control
- Annual **turnover rate** in rental housing is 20%: Re-education via property managers is important to meet waste diversion goals



Strategy #2: Mandatory Food Waste Diversion

- Other cities **mandated**: Toronto, San Francisco, Seattle, Boulder. (CA & VT have mandates statewide)
- Largest portion of **divertible trash (29%)**
- Compost disposal (\$81) is **less expensive** than trash (\$139)
- Significant **environmental benefits**
- Removing food waste from trash can **reduce rodent activity** (2024 audit: **only 2% of compost bins have rodent holes**).



Strategy #3: Reduce move-out waste

- **Trash increases by 20%** during move-out weeks.
- The Recycling Advisory Committee (RAC) Piloted a **“Free Store”** idea which was very successful.
- Other avenues include: **Buy Nothing groups**, collaboration with **University’s**, and more.



April 2024



August 2024



Strategy #4: Reduce single-use serviceware from Food Establishments

- **Single-use products**, especially plastics are a hot topic. We need to reduce the use of single-use products.
- Environmentally, there are no universal best product between plastic, paper, glass, and aluminum: *UN Lifecycle Institute Report*.

Potential Ordinance Changes:

- Require foodservice businesses to ask customers to **opt-in** to single-use items (napkins, utensils, straws, etc) rather than opt-out
- Require each food establishment to provide patrons with **access to recycling and composting**



Strategy #5: Make Recycle Center more accessible

- **Relocating** the Recycle Center within in the DPW Yard and **improving accessibility** to reduce trash and improper disposal of universal waste (i.e. rechargeable batteries, fluorescent bulbs).



Draft Medium-Term Strategies (4-6 years)

- **Enforce mandatory food waste diversion**
- Research and analyze whether City should implement **Hybrid Pay-As-You-Throw** (100+ MA communities have PAYT)
- Provide **technical assistance** to commercial sector to facilitate reduce/reuse and improved recycling/composting
- Work with CHA and other **property managers** to increase diversion and sanitation



Other Draft Strategies

Weaving into these strategies the City will **continue** to:

- **Educate** and conduct **outreach** to achieve the City's waste reduction goals
- Encourage **reduce & reuse**, through online exchange, peer-to-peer swaps, Fix It Clinics, etc.
- Continue engaging with people that may need assistance accessing our programs
- Stay connected to **State Policy and legislation changes** (i.e. extended producer responsibility (EPR) legislation or new waste bans.)



ZWMP 2.0 Next Steps

- The strategies presented today are **drafts**.
- DPW & RRS are **continuing outreach** with property managers and residents.
- We **welcome feedback** through the end of November 2024.
- Anticipated **completion** date: **early-2025**
- **ZWMP 3.0**: Starts in 2030



Questions?

- Email: Recycle@CambridgeMA.Gov
- Sign-up for Recycle Newsletter: www.CambridgeMA.Gov/Subscribe



Appendix of Extra Information

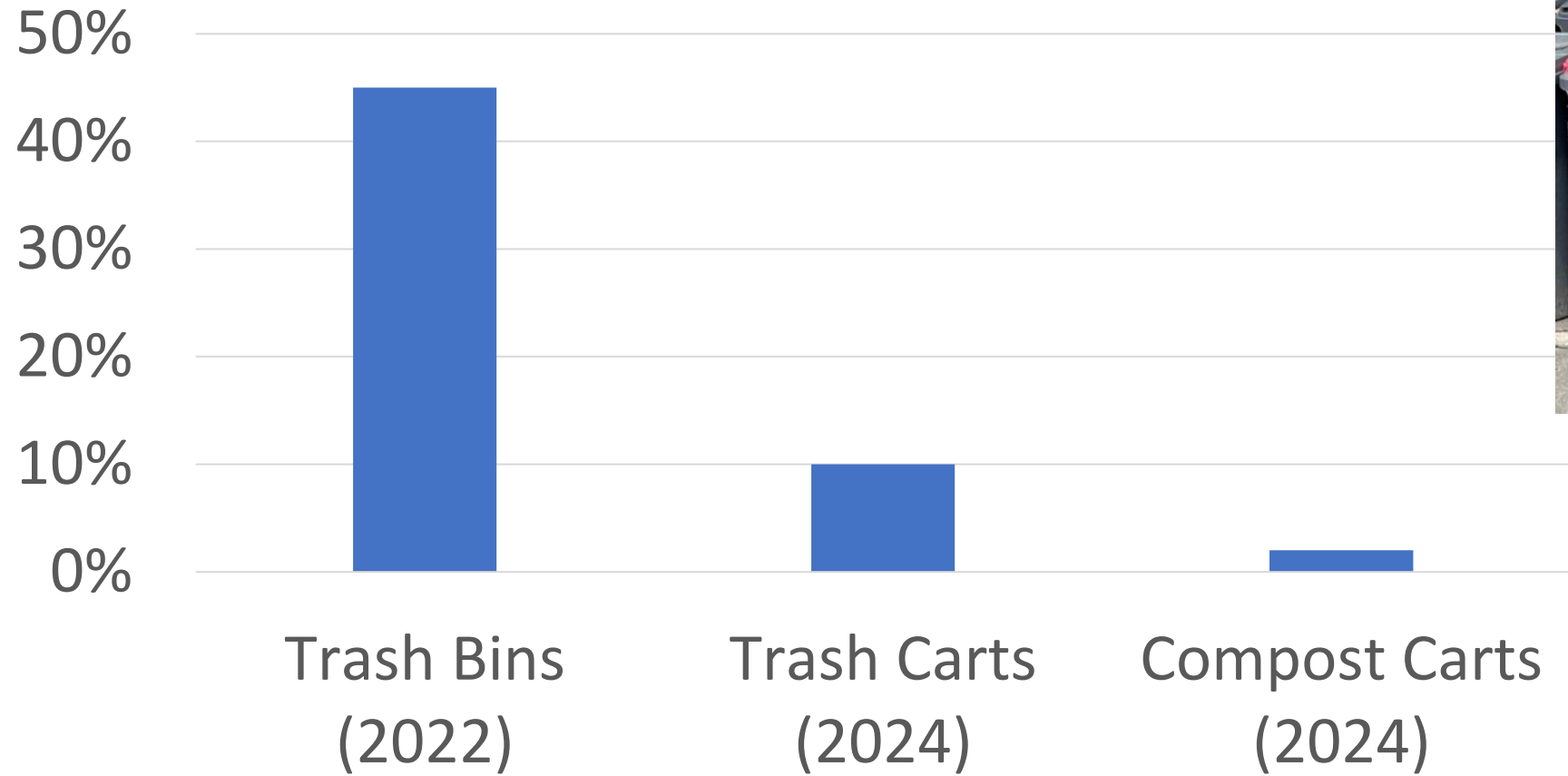


Emissions Reduction of Collection Fleet

- DPW sends 10 trucks for daily collection
 - 3 trucks are hybrid vehicles
 - 1 EV truck in service by Nov. 2024
 - 2 EV truck arriving in early-2025
 - 1 EV truck funded
- Recycle & Yard Waste new hauling contract starts in 2025 and will include two EV trucks.



Collection Bins with Rodent Holes



NOTE: 2024 Audit: Many compost carts are 6 years old.

Source: June 2024 audit

