

Scaling Composting Access Through Smart Tech in DC

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WE ARE WASHINGTON
GOVERNMENT OF THE DISTRICT OF COLUMBIA
DC MURIEL BOWSER, MAYOR



The District of Columbia is unique

We govern like a city, a county, and state
- Home Rule since 1974

The Nation's Capitol, we are home to:

- **700,000 tax-paying Americans**
- **350,000+ homes**
- **60,000+ businesses**
- **27 million annual visitors in 2025** (Source: Destination DC)

Regional Access to Composting

Like other densely populated cities, DC relies on disposal capacity in the surrounding area

>> Subset of regional organics processing facilities accepting food waste within 35-mile radius of US Capitol Dome



Why Focus on Food Waste?

- Food waste is the single **most common material sent to landfills**, comprising 24.1% of municipal solid waste (US EPA)
- **Generates methane**, a potent greenhouse gas
- **Preventable, attracts + sustains rodent populations**
- Can be put to better use through **donation & composting**



What are the Access Concerns that Unify us?

People have:

- Time constraints
- Physical challenges
- Technical barriers
- Preconceptions

Why Access to Composting Matters

- **Convenience** often outweighs intention; access influences behavior
- Pre-requisite to fostering a **composting habit**
- Increases participation in **waste diversion**
- Builds a reliable **feedstock** for regional composting facilities

People don't fail to compost because they don't care; they will if it's inconvenient.

If access to composting is not thoughtfully built into daily life, participation will not scale.

Public Composting Access in DC

DC DPW-provided composting access to residents:

- ▶ Started with 8 weekend drop-offs in 2017
- ▶▶ Grown into a network of 44 drop-off options, to support a daily composting habit for >20,000 monthly households in 2026 (and growing)

167% average yearly growth in food waste directed to composting

Timeline for Growing Access

2017-2023: Groundwork

Curbside collection:

- Planning of opt-in curbside food waste collection pilot (9,000 HH for pilot)

Drop-off:

- Adopted an established community drop-off effort by Agricity (DBA Compost Cab)
- 8 grows to 12 weekend food waste drop-offs at farmers markets (seasonal to all-year)

Regional Facilities

2013-2021:
Three major regional composting facilities started accepting food waste for composting or AD

Key Legislation

2014: Sustainable Solid Waste Management Amendment Act
Formation of DPW Office of Waste Diversion, etc.

2020: Zero Waste Omnibus Act – Major focuses are food waste composting and edible food donation

Timeline for Growing Access

2023-2024: Major Growth

Curbside:

- Aug 2023: Curbside Composting Pilot start with local organics management firm (Compost Crew, contract)
- 98% satisfaction rating, Average setout = 7 lbs.
- Pilot transitioned to Program, re-branded “Compost DC”

Drop-off

- July 2024: Pilot Smart Bin at GWU
- Procurement of 30 Smart Bins for installation citywide
- Fall 2024: Transitioned 3 seasonal drop-offs to year-long & engagement on smart bin placement



Harmonization of Materials Accepted

The same materials are accepted across DC DPW's residential food waste diversion programs:

Curbside:

- Food collection program

Drop-off:

- Weekend drop-off events
- Food waste smart bins

Why is this important? The users are often the same.

✓ Accepted Materials



Fruit & veggie scraps, salad



Milk, cheese, eggs & dairy



Meat, seafood, bones & shells



Bread, grains, pasta & nuts



Cooked, spoiled & oily foods



Food-soiled paper & cut flowers

✗ Not Accepted



Plastic bags, straws, containers, utensils, twist ties & stickers



Diapers, pet waste & other trash



Metal, plastic, glass, recyclables & foil



Yard waste
(Call 3-1-1 to schedule a free yard waste pickup)

Timeline for Growing Access

2025 to present: Continued Growth

Curbside:

- FY 2026: Approval to expand curbside program
- New bin design (larger capacity, animal lock, stand-out design to help deter bin theft)
- Outreach to join the curbside waitlist for expansion
- Dec 2025: Added 3,000 more HH (12,000 total)

Drop-off

- Early 2025: Finalized wrap design
- Installed 30 smart bins citywide (3 to 5 per ward)
- Outreach to residents (print/news/social/in-person)



Increased Participation Over Time

Today

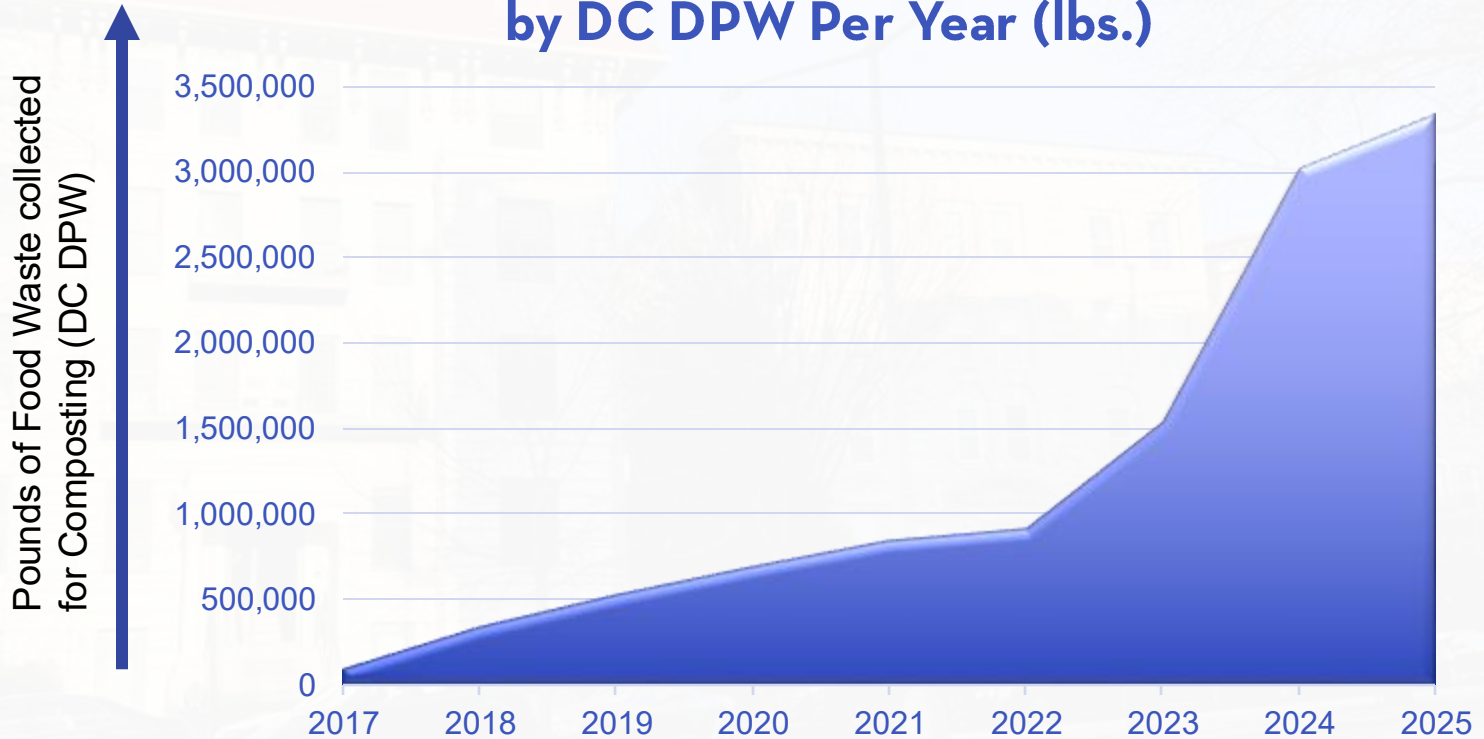
**2025/2026 – Curbside Food Waste
Collection Expansion (+3,000 weekly)**

**2025 – Drop-off Expansion: More year-round events
+ thirty-one 24-hour Smart Bins (+8,000 users)**

**Curbside Food Waste Collection
2023 Pilot + 2024 Program (+9,000 weekly customers)**

**2017-2023: Weekend Food Waste Drop-
off only (2,500 weekly visitors)**

Total Food Waste Diverted by DC DPW Per Year (lbs.)



Smart Food Waste Collection Technology has been a game-changer for DC

" YOU CAN DO IT TOO... "

- VIRGIL ABLOH



Washingtonians are industrious

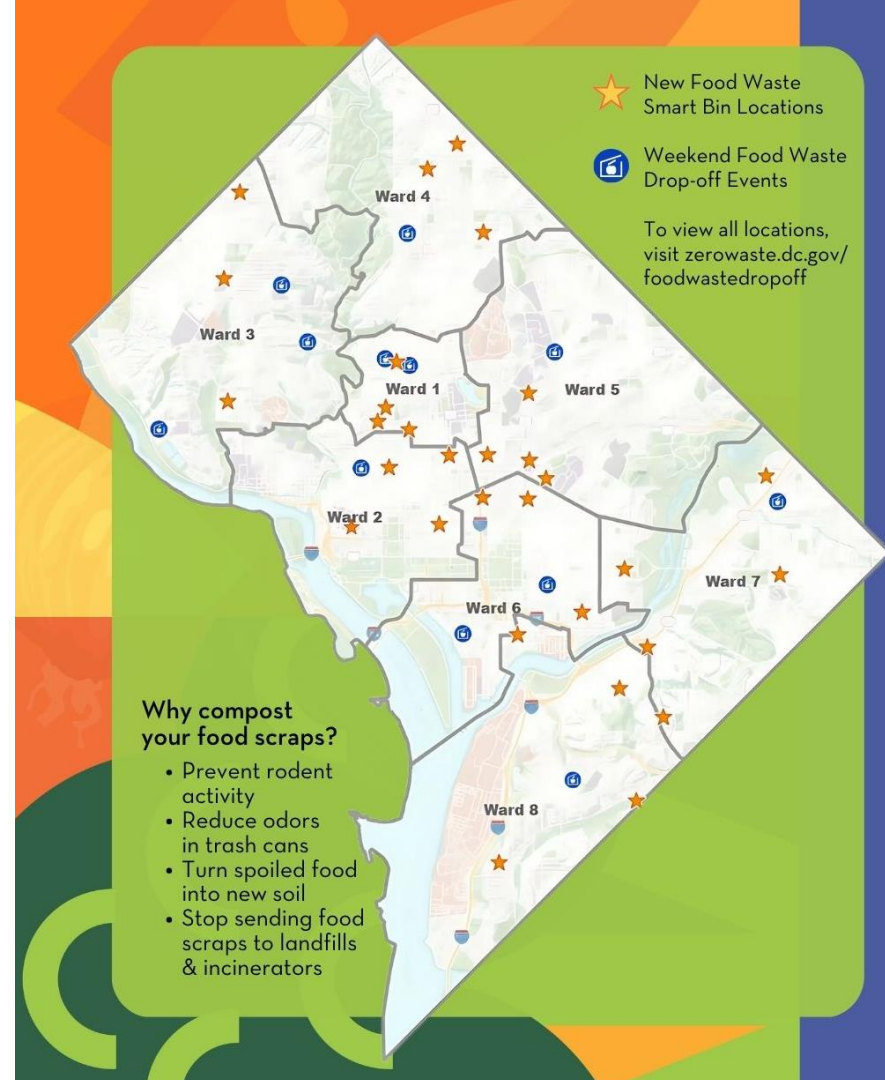
24-hour access to food waste drop-off makes composting possible for 1000s of residents

Vibrant design on bin stands out from trash/recycling & educates quickly



44 total Food Waste Drop-off options

- 31 Smart Bins (24-hour access)
- 13 Weekend Food Waste Drop-off Events
 - Year-round
 - 9am-1pm Sat or Sun
 - near food sources



" YOU CAN DO IT TOO... "

-VIRGIL ABLOH

Washingtonians are concerned about rodents

So are we. Taking food out of carts in alleyways and placing into locking steel enclosures with a rodent-proof design is key

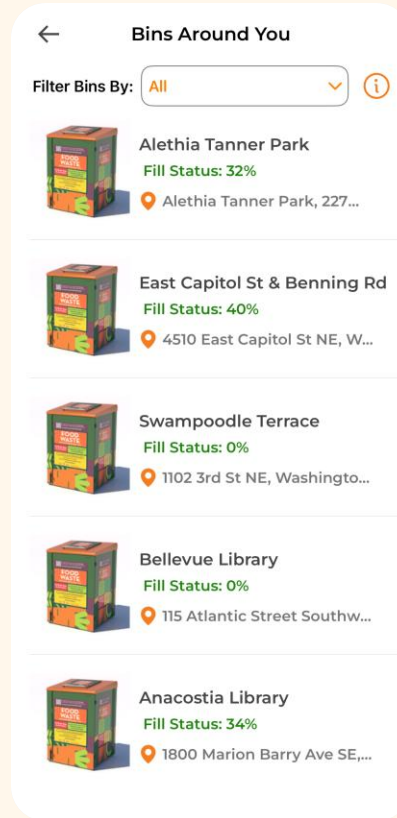
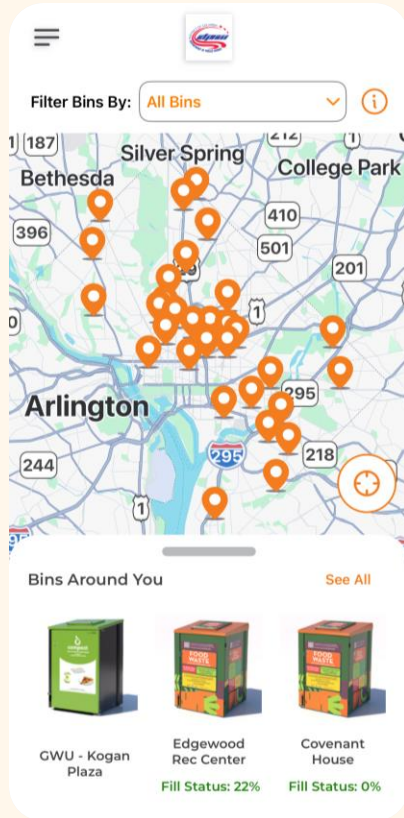




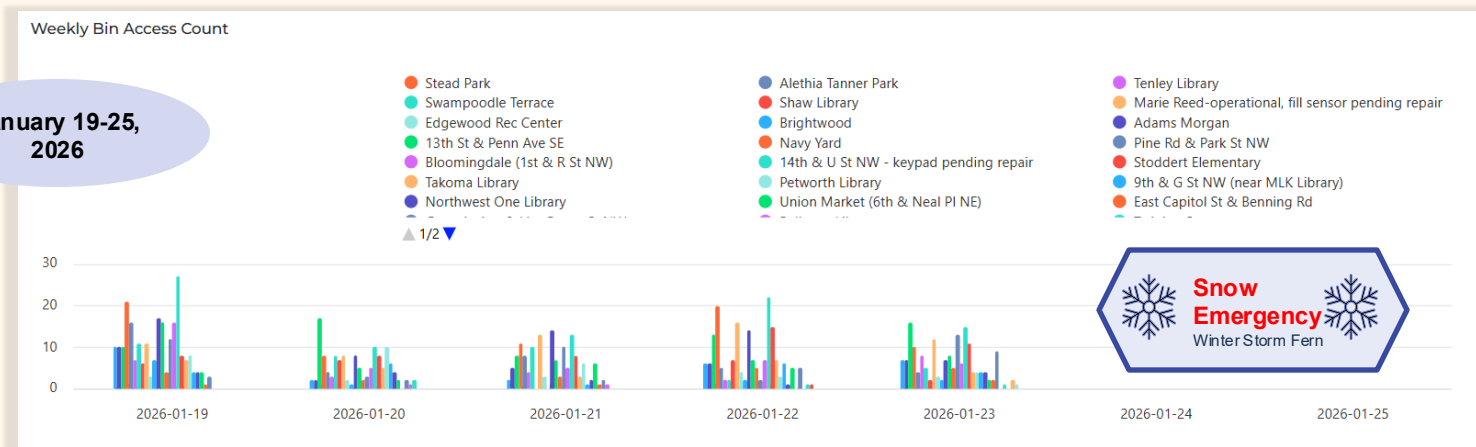
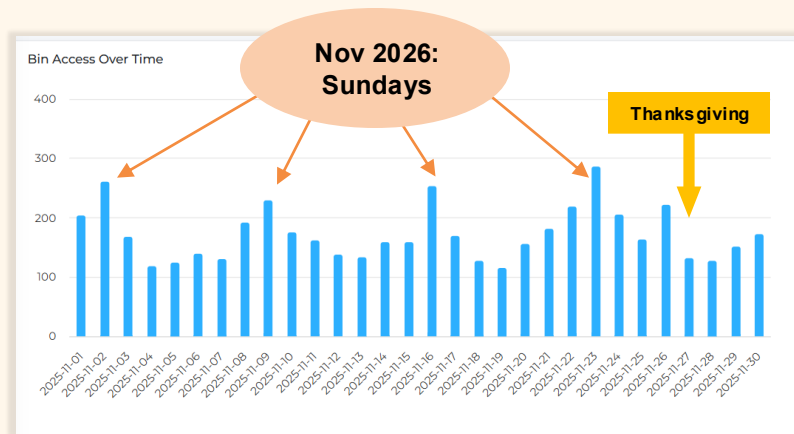
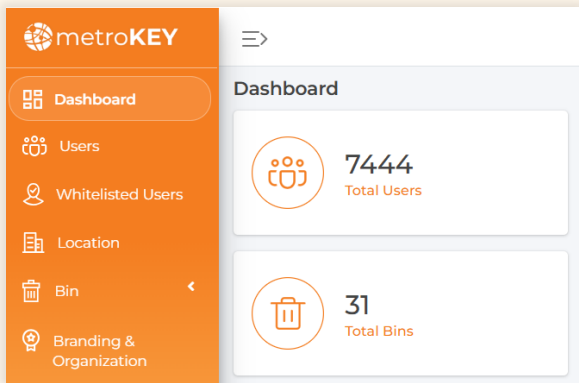
**Much of DC is walkable;
it is common for residents to
be car-free**

Smart bins should be nearby.
Bins & weekend drop-offs placed
near population densities,
multi-family dwellings

Unlocking a DPW Smart Bin: User's Perspective



Admin's Perspective



Key Points to Consider for the Placement of Smart Bins in a City

EXAMPLE: Customize the list for your needs + goals

1. **High-density living nearby**
2. Community recommended
3. Geographic Distribution
4. **Safety & Visibility**
5. **Serviceability**
6. Proximity to points of interest
7. **Rodent mitigation**
8. **Accessibility & Clearance**
9. On Public Property
10. Co-located with Trash Containers
11. **Outside of tidal flood hazard area**
12. Outside of Active/Permitted Construction Zone
13. Be a good neighbor
14. **Foundation considerations**

Food Waste Smart Bins

	Month	# Bins installed	Average Weight Per Month
Pilot	July 2024	1	Per Bin: 674 lbs. (11.38 tons)
	August 2024	1	
	September 2024	1	
FY25	October 2024	1	Per Bin: 1,558 lbs. (0.78 tons)
	November 2024	1	
	December 2024	1	
	January 2025	1	
Phase 1	February 2025	31	Per bin: 734 lbs. (0.37 tons) All: 22,752 lbs. (11.38 tons)
	March 2025	31	
	April 2025	31	
	May 2025	31	Per bin: 1,824 lbs. (0.91 tons) All: 56,565 lbs. (28.28 tons)
	June 2025	31	
	July 2025	31	
	August 2025	31	
	September 2025	31	
	October 2025	31	
FY26	November 2025	31	Per bin: 2,152 lbs. (1.08 tons) All: 66,707 lbs. (33.36 tons)
	December 2025	31	
	January 2026	31	Per bin: 1,836 lbs. (0.92 tons) All: 56,925 lbs. (28.46 tons)
	February 2026	31	
March 2026	31		

Transitional Periods:

First 3 months after each installation

Average Full Bin weight

Sensor reading 90%-100% full

209 lbs.

(64-gal interior cart)

Average Bin weight

At time of service
(regardless of fullness level)

145 lbs.

(64-gal interior cart)



LESSONS LEARNED

- **Placement** is **KEY** (Orientation, Location)
- **Good Design** is **CRITICAL** (1. Function, 2. Communicate, 3. Be Attractive; “Sidewalk billboards for Composting”)
- **Access** means **EVERYONE**
ADA, Topography, Low & high-tech access options: Consider those that choose not, cannot & may not use an app (keypads help)
- **Safety** is **PARAMOUNT**

LESSONS LEARNED

- **Reliable Data is REVOLUTIONARY**

Sensors are a big help; *Ex. prioritizing service during an emergency*

- **Wear & Tear will happen: MAINTENANCE**

Inspiration brought them there; cleanliness + functionality will keep them coming back

- **Cutting Edge: Requires time & ATTENTION**

Questions?

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