



CEEJAC WASTE SUBCOMMITTEE

Co-Chairs:

Sharon Lewis, CT Coalition for Environmental and Economic Justice

Adrienne Farrar Houel, Greater Bridgeport Community Enterprises

October 17, 2023 10a-12p

INTRODUCTIONS

Welcome – Adrienne Farrar Houel, Greater Bridgeport Community Enterprises

Roll Call – Adrienne Farrar Houel

- Sharon Lewis
- Rev. Dr. Albert Bailey Jr.
- Yolanda L. Stinson
- Alex Rodriguez

AGENDA

- Welcome & Roll Call – Adrienne Farrar Houël
- Overview of Agenda – Sharon Lewis
- Ground Rules – Michael Davis
- Subcommittee Introductions – Sharon Lewis
- Summary of Subcommittee Goals – Sharon Lewis
- Presentation about Connecticut’s Waste System – James Albis, CT DEEP
 - **MIRA Dissolution Authority – Joe DeNicola, CT DEEP**
- Discussion
 - **AB ECO Park Update – Gaby Frigon, CT DEEP**
- Public Comments – Adrienne Farrar Houël
- Next Steps – Adrienne Farrar Houël

CEEJAC MEETING GROUND RULES

During the discussion, all members should:

- Listen respectfully, without interrupting.
- Listen actively and with an ear to understanding others' views.
- Only have one conversation at a time.
- Be mindful to give others the opportunity to speak.
- Focus on the task at hand rather than the position.
- Avoid off-topic conversations.
- Criticize ideas, not people.
- Commit to learning, not debating.
- Avoid blame, speculation and inflammatory language.
- Avoid assumptions about any member of the group.

A stylized, colorful landscape illustration. The top right corner features a bright yellow sun. Below it is a large green hill with a dark blue outline. The bottom of the image shows a light blue body of water, also outlined in dark blue. The text "Subcommittee Introductions" is centered on the green hill.

Subcommittee Introductions


SUMMARY OF WASTE SUBCOMMITTEE GOALS

1. Understand existing waste systems and technologies
2. Identify community concerns regarding adaptation of waste solutions
3. Provide recommendations on priorities to consider regarding waste solutions



CEEJAC WASTE SUBCOMMITTEE

October 17, 2023 Meeting

A stylized landscape illustration. The top right corner features a yellow sun. Below it is a green hill with a dark blue outline. The bottom portion of the image is a light blue area representing water, also with a dark blue wavy outline. The text "Connecticut's Solid Waste System" is centered on the green hill.

Connecticut's Solid Waste System

WHAT WILL BE COVERED IN THIS PRESENTATION?

- Municipal solid waste management (not construction and demolition debris, bulky waste, or hazardous waste)
- Data related to municipal solid waste and the different ways it is managed (i.e., disposal, recycling, composting)
- Types of infrastructure used to manage municipal solid waste
- Recent system changes
- Future outlook for municipal solid waste management in Connecticut
- *Please feel free to ask questions as we go!*

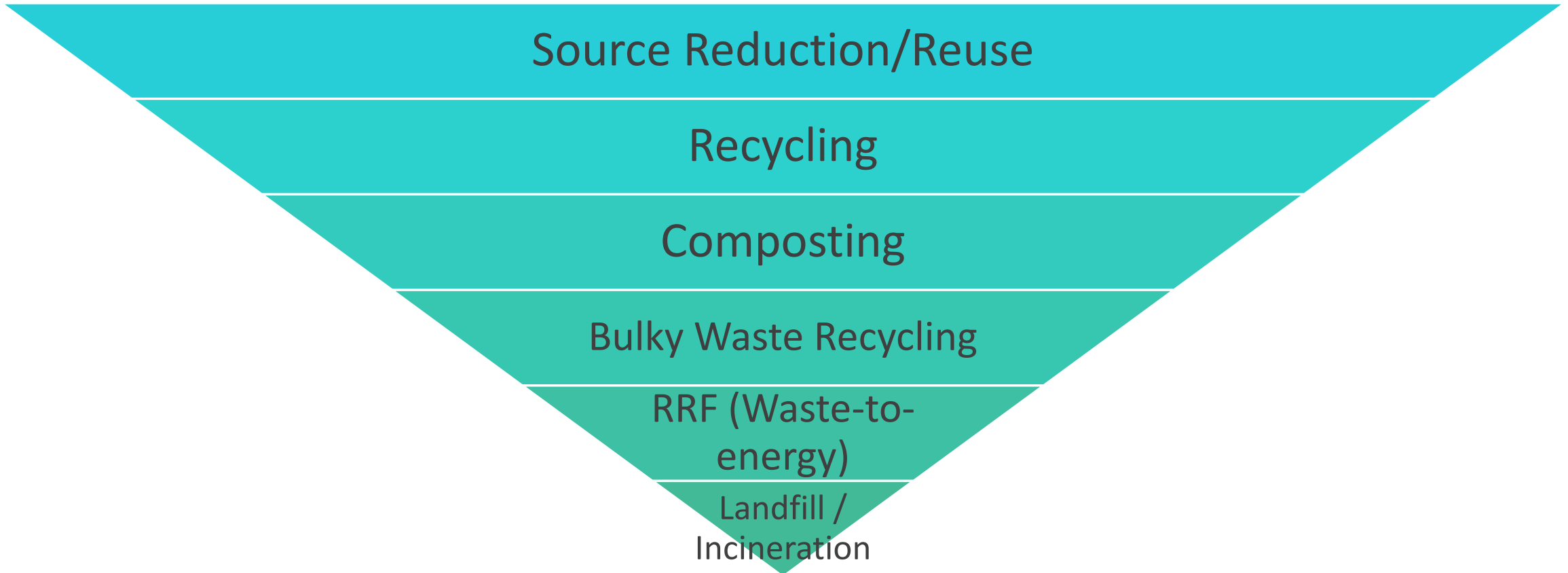
KEY DEFINITIONS (CGS 22a-207 & 207a)

- Solid waste means unwanted or discarded solid, liquid, semisolid or contained gaseous material, including, but not limited to, demolition debris, material burned or otherwise processed at a resources recovery facility or incinerator, material processed at a recycling facility and sludges or other residue from a water pollution abatement facility, water supply treatment plant or air pollution control facility
- Municipal solid waste (MSW) means solid waste from residential, commercial and industrial sources, excluding solid waste consisting of significant quantities of hazardous waste as defined in CGS 22a-115, land-clearing debris, demolition debris, biomedical waste, sewage sludge and scrap metal
- Resource recovery facility (RRF) means a facility that combusts municipal solid waste to generate electricity (i.e., a waste-to-energy facility)
- Recycling means the processing of solid waste to reclaim material therefrom
- Composting means a process of accelerated biological decomposition of organic material under controlled conditions

KEY TERMS (FOR PURPOSES OF THIS PRESENTATION)

- Disposal means MSW that is not recycled and is instead sent to a landfill or waste-to-energy facility to be buried or burned, respectively
- Materials Recovery Facility (MRF) means a facility that receives materials eligible for single stream recycling, often from curbside recycling bins, and sorts and bales those materials for recycling at another facility
- WIWO means What's In What's Out, a standardized list of materials that are recyclable through the single-stream across the state
- **Generator** means a person or entity who creates MSW by discarding a material at the end of its useful life
- Source separation means separating some types of MSW, such as single stream-eligible materials or food scraps, from materials to be disposed to facilitate recycling of those materials

CONNECTICUT'S WASTE HIERARCHY (CGS 22A-228)



HOW MSW IS COLLECTED IN CT

- Municipally managed collection services
 - Municipality funds curbside collection through taxes
 - Collection performed either by municipal workers or by contracted private hauler
- Private subscription services
 - Many municipalities do not fund curbside collection and residents and businesses are required to make their own arrangements for curbside collection by subscribing directly with a private hauling company
- Self-haul (aka drop-off)
 - Trash and recycling collected at a designated drop-off location, such as a municipal transfer station
 - Many municipalities that manage curbside collection services offer self-haul transfer station drop-off as an alternative or supplement to subscription service

DATA CAVEATS

- Data may contain typographical errors or inaccuracies from reporting or input
- Reports may be missing, typically from town transfer stations
- Recycling data is frequently double-counted as it gets transported between CT MRFs; we have attempted to minimize such double-counting
- Data does *not* include: MSW sent directly out-of-state from generation locations; materials sent to small-scale composting facilities; textiles received by charitable organizations; and anaerobic digestion facilities where no more than 40% of the feedstock material received is food scraps
- Bottle Bill tonnages based on estimates from escheat revenue

HOW MUCH WASTE DOES CT GENERATE?

In 2022, Connecticut residents and businesses generated

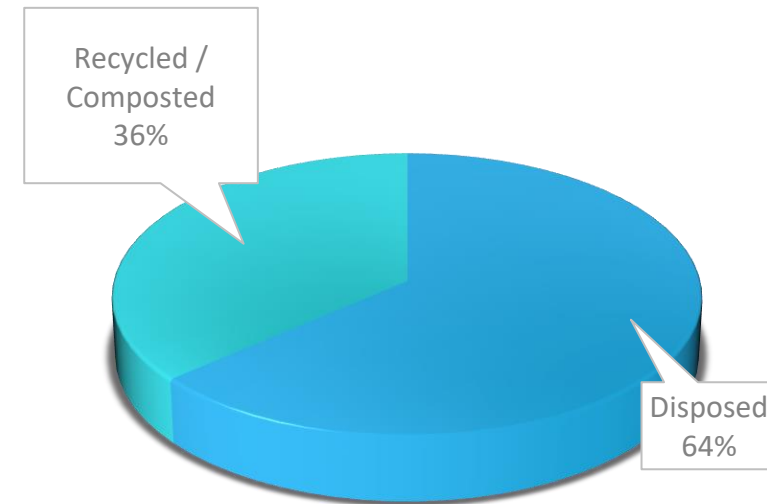
3,439,688 tons of MSW (about 0.9 tons per person)

Of that total,

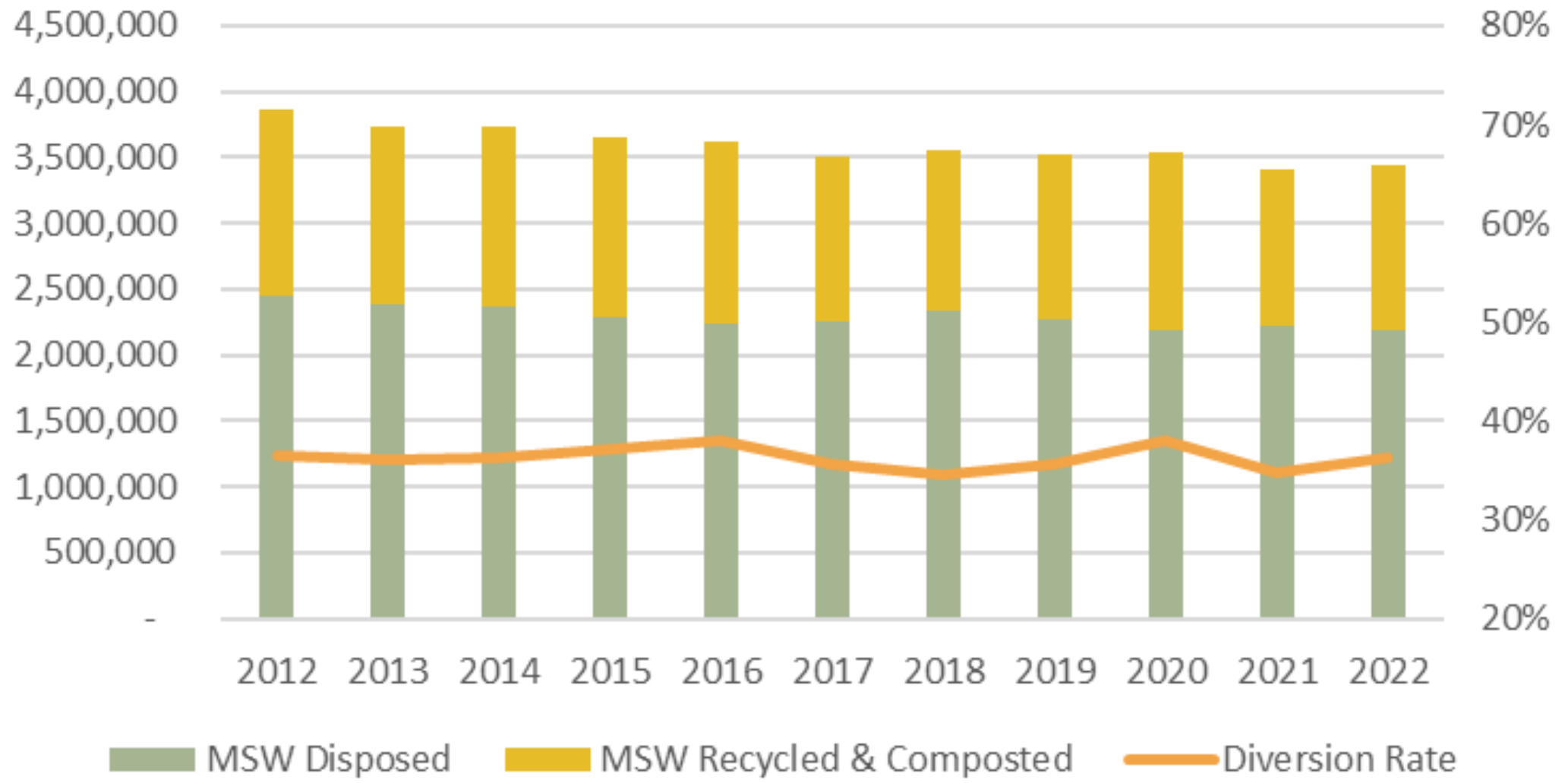
2,188,395 tons were **disposed**, and

1,251,293 tons were **recycled or composted**

Tons MSW

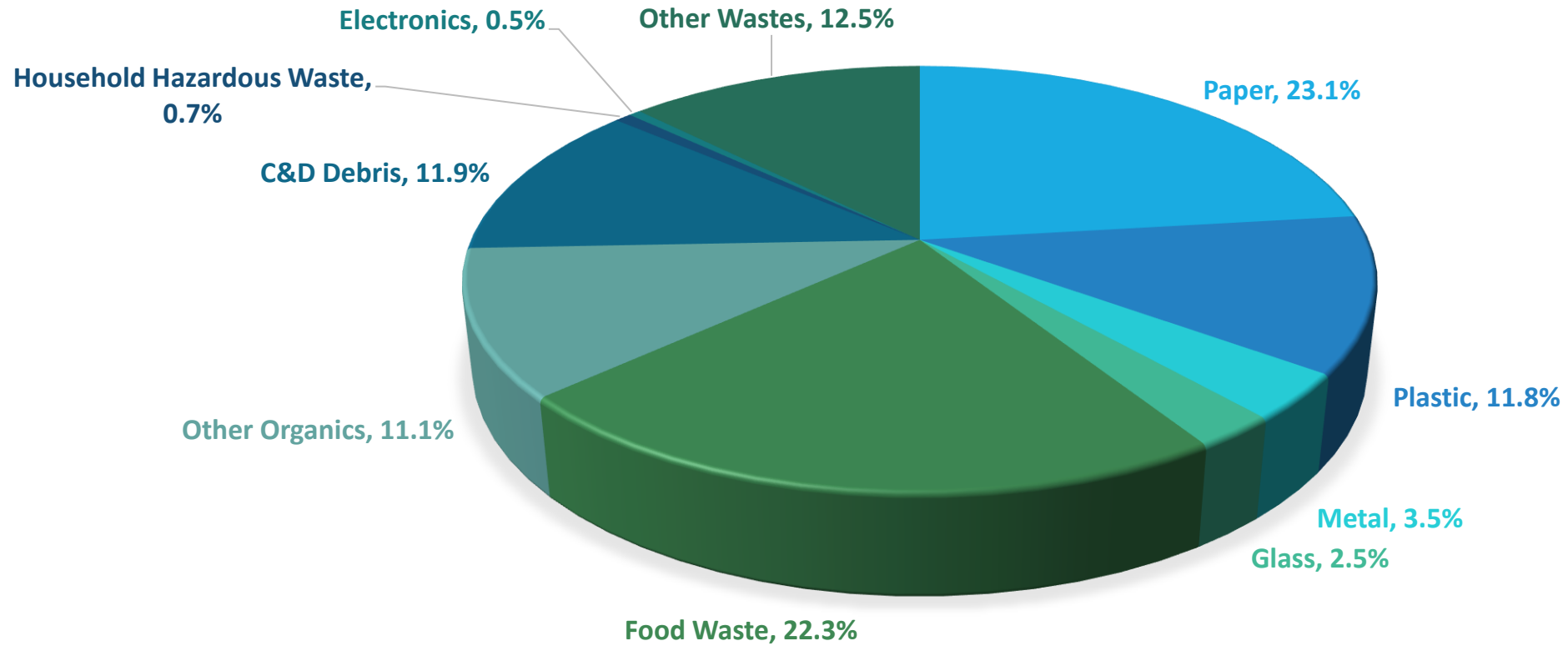


MSW Generation



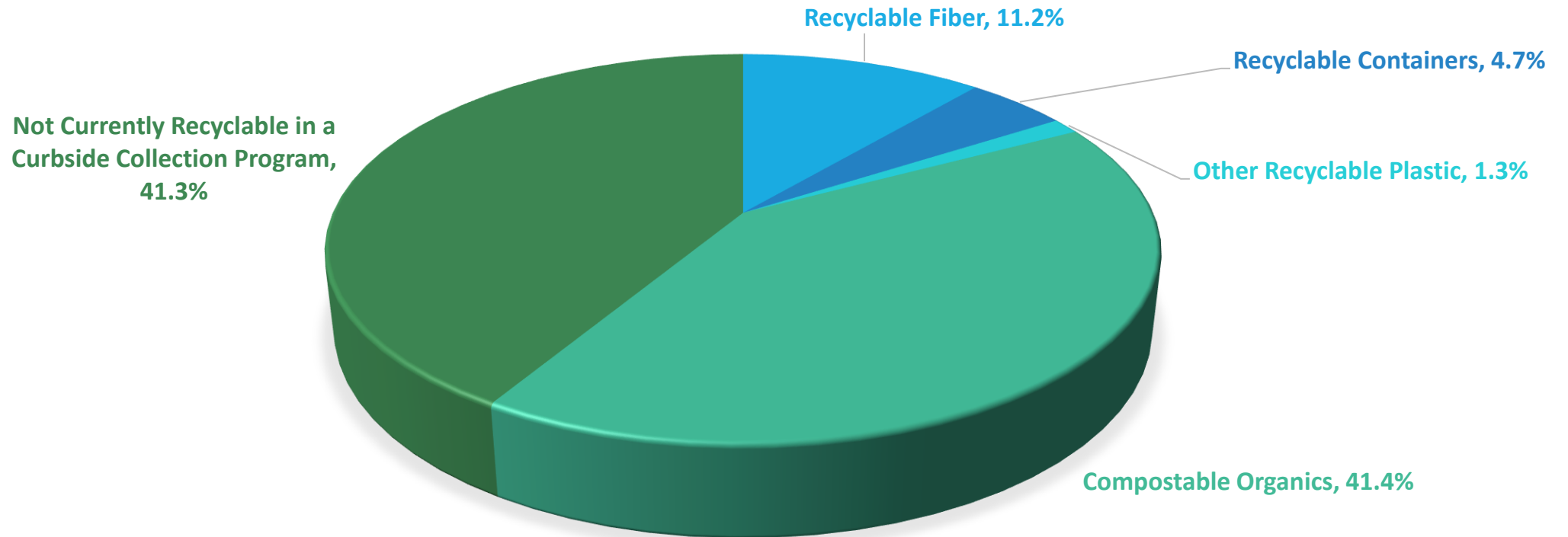
WHAT IS IN OUR TRASH?

MSW COMPOSITION (2015 STUDY)



WHAT IS IN OUR TRASH?

RECOVERABILITY OF DISPOSED WASTE (2015 STUDY)





Disposal

MSW DISPOSAL

CT-generated MSW is disposed at two types of facilities:

RRFs



WIN Waste Bridgeport RRF, managed approx. 720,000 tons of CT MSW in 2022

Landfills

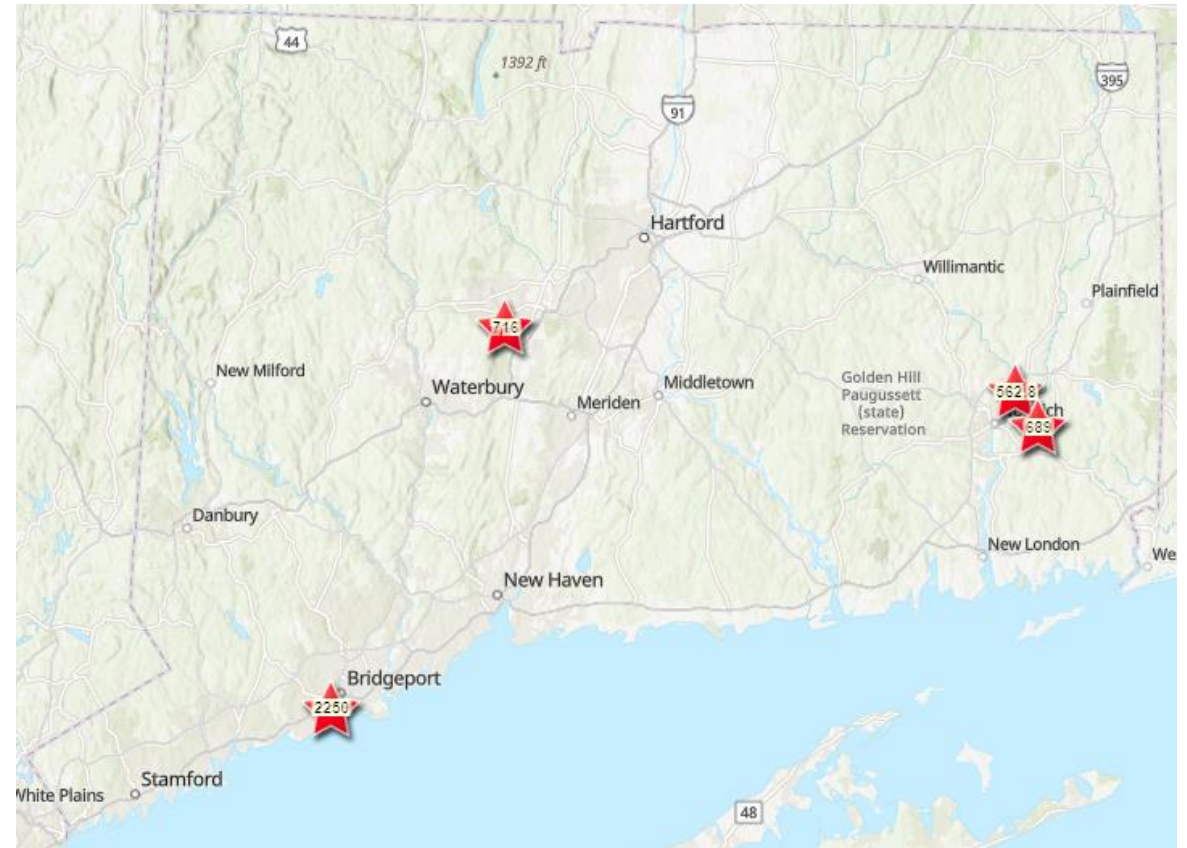


Keystone Sanitary Landfill, PA, managed approx. 180,000 tons of CT MSW in 2022

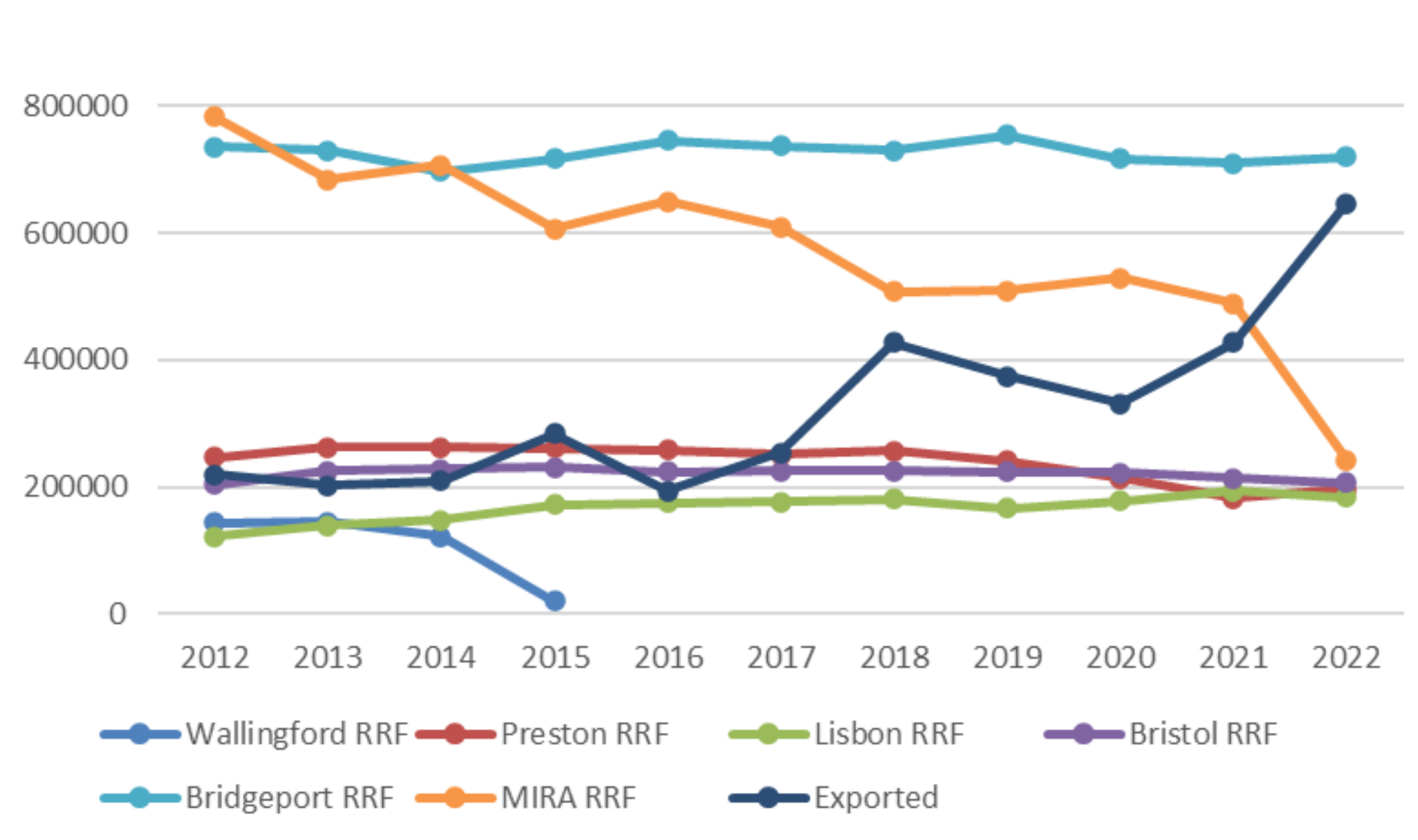
RRFS

Key considerations:

- Following the closure of the MIRA RRF in July 2022, there are now four active CT RRFs
- RRF byproduct is ash that is sent to ash landfills in Putnam, CT or Shrewsbury, MA
- Some MSW is exported to RRFs in MA, VA, and NY
- Remaining RRFs in CT are between 27-35 years old
- CT RRFs are a source of air pollution
- Remaining CT RRFs are privately run



MSW Disposed by CT Facility



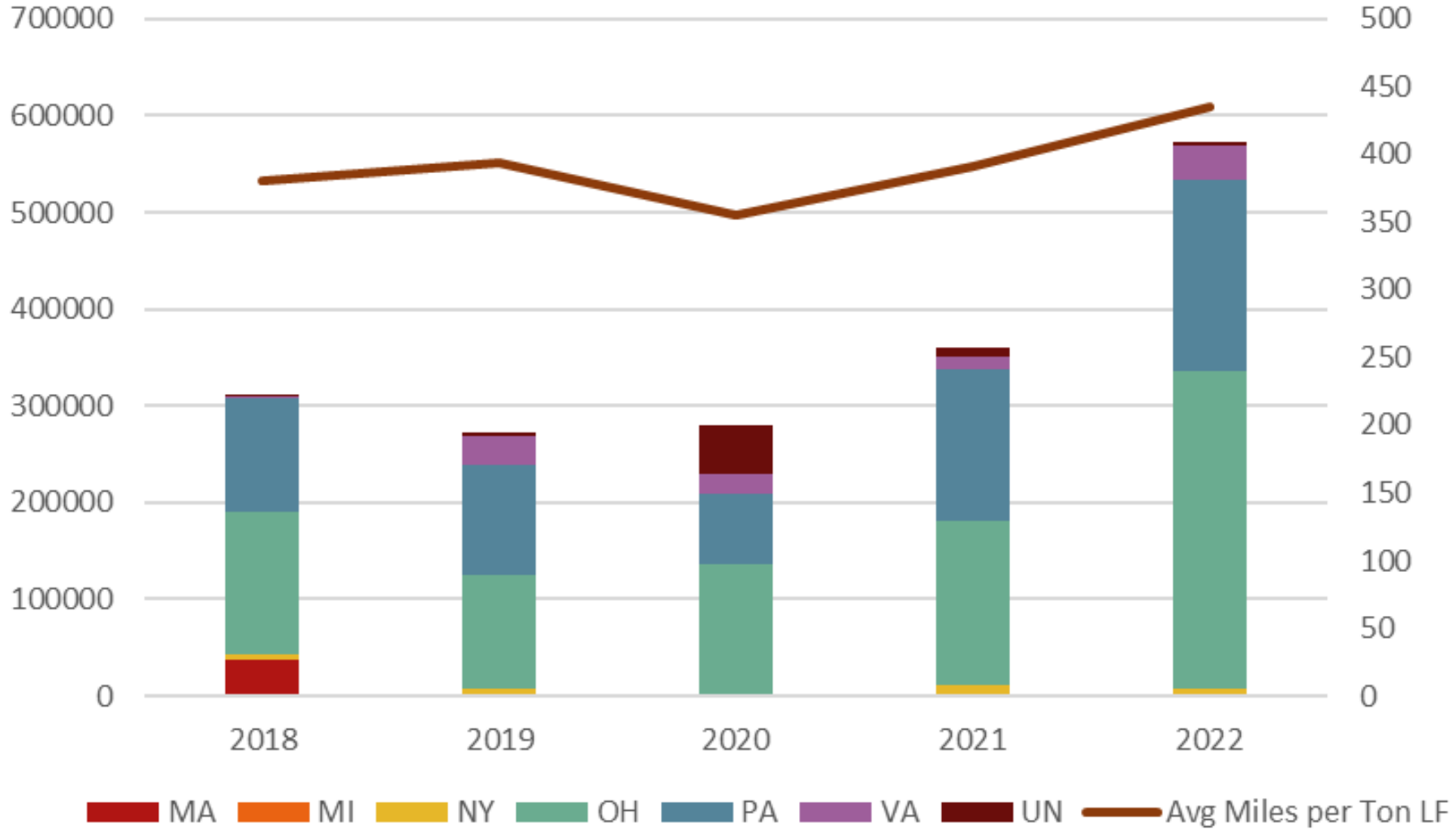
LANDFILLS

Key information:

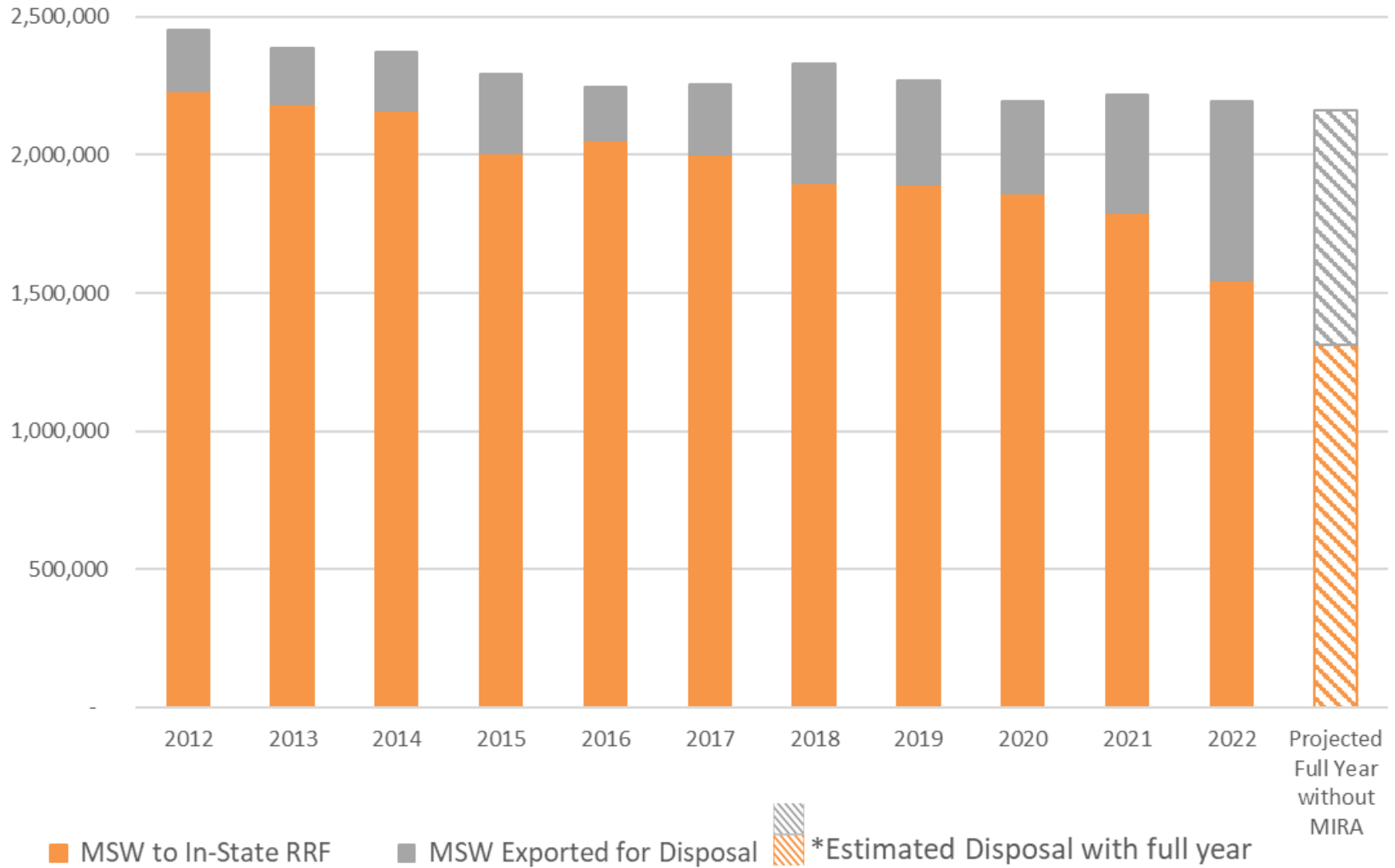
- **CT no longer has MSW landfills**
- **All CT-generated MSW that is landfilled is landfilled out of state**
- **Landfills that accept CT-generated waste can have negative impacts to surrounding communities, including traffic-related air emissions, odors, and leachate impacting groundwater**
- **MSW is transported long distances to reach disposal locations**
- **Landfills are significant contributors to greenhouse gas emissions**

Landfill Name	State	Total Tons MSW Accepted 2018-2022	Est. Miles Traveled
Keystone Sanitation LF	PA	538,366	228
BFI Carbon Limestone LF	OH	411,034	497
Tunnel Hill Landfill	OH	197,466	623
Sunny Farms Landfill	OH	190,042	652
Brunswick Landfill	VA	94,842	532
Empire Sanitary Landfill	PA	76,785	196
Apex Landfill	OH	70,434	530
Seneca Meadows Landfill	NY	27,220	293
WM Tullytown Landfill	PA	26,643	185
LaFarge Landfill	OH	25,842	509

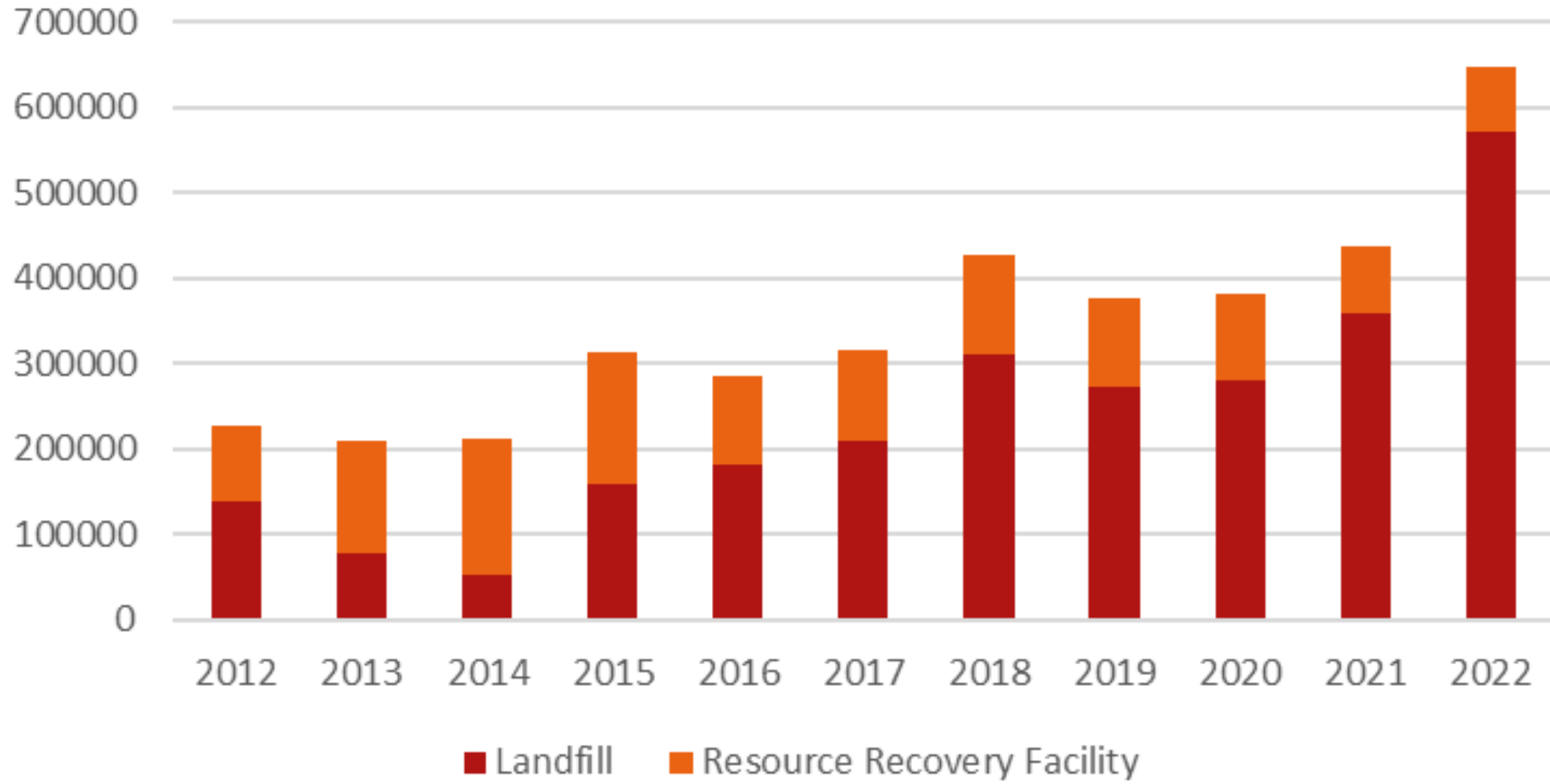
Landfilled MSW Disposal Locations



CT Generated MSW Disposed Annually



Exported MSW Disposed by Facility Type



OTHER DISPOSAL TECHNOLOGIES

- Gasification, other thermal technology
 - Use heat to break down MSW into a syngas or other byproduct
 - Byproducts can be used for energy, such as electricity or sustainable aviation fuel
 - Emissions as compared to traditional CT WTE – more information needed
 - Expensive
- Mechanical Biological Treatment (MBT)
 - Combination of technology that can pull out recyclables and/or organic material for recycling prior to disposal in RRFs
 - Higher risk of contamination of potentially recyclable and compostable materials due to items found in MSW stream such as dirty diapers, pet waste, and household hazardous waste

A stylized landscape illustration. At the top right, a yellow sun is partially visible. Below it, a large green hill with a dark blue outline dominates the middle ground. The word "Recycling" is written in white, sans-serif font across the center of this green hill. To the left, a smaller, lighter green hill is partially visible. At the bottom, a light blue area represents water, also outlined in dark blue.

Recycling

RECYCLING

There are several ways that MSW can be recycled by generators in CT:

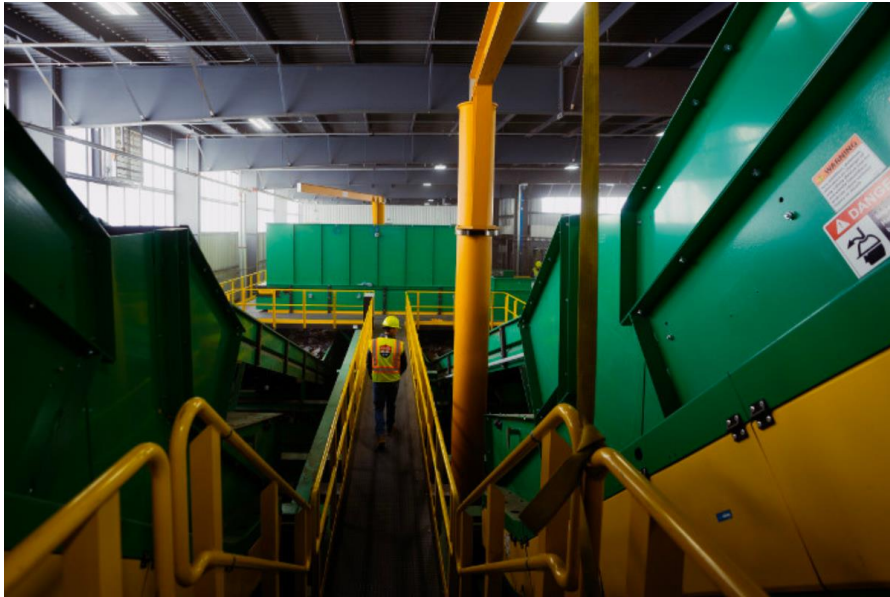
- Single stream (e.g., blue curbside bin or drop-off location)
 - Items such as paper, glass, aluminum, and plastic that are designated for recycling by statute and regulation
 - Material sent to a MRF for sorting and baling and then is “marketed” to a processor for recycling
 - Any material that cannot be recycled is called “residual” and is sent for disposal
- Bottle bill redemption program
 - Certain beverage containers have a deposit the consumer pays upon purchase; those bottles can then be redeemed at independent redemption centers or at most retail locations that sell such containers so that the consumer gets their deposit back
 - Material is typically sent directly from the redemption location or distributor to a processor that recycles the material
- Local programs targeting specific materials
 - E.g., [HRRR glass collection program](#)

RECYCLING

- Methods of food scraps recycling for generators:
 - Co-collection: food scraps bagged separately from other trash but placed in the same trash bin; later sorted at a facility by the permitted facility operator ~~collector~~ and then sent to another facility where the food scraps are recycled
 - Separate route: dedicated collection route for source-separated food waste either run by the municipality or individual subscription
 - Drop-off: source-separated food scraps drop-off locations at the local transfer station or at satellite municipal collection locations
 - Home/Backyard composting: separating food scraps for composting at one's residence
- RecycleCT Wizard app:
 - <https://www.recyclect.com/>

RECYCLING INFRASTRUCTURE

MRF



USA Recycling facility in Berlin

Reverse Vending Machine



TOMRA reverse vending machine at The Arc Eastern Connecticut in Woodstock

RECYCLING INFRASTRUCTURE

Commercial Anaerobic Digester



Quantum Biopower facility in Southington

On-Farm Anaerobic Digester



Oakridge Dairy facility in Ellington

RECYCLING INFRASTRUCTURE

Large-scale Composting Facility



New Milford Farms

Food Waste to Animal Feed



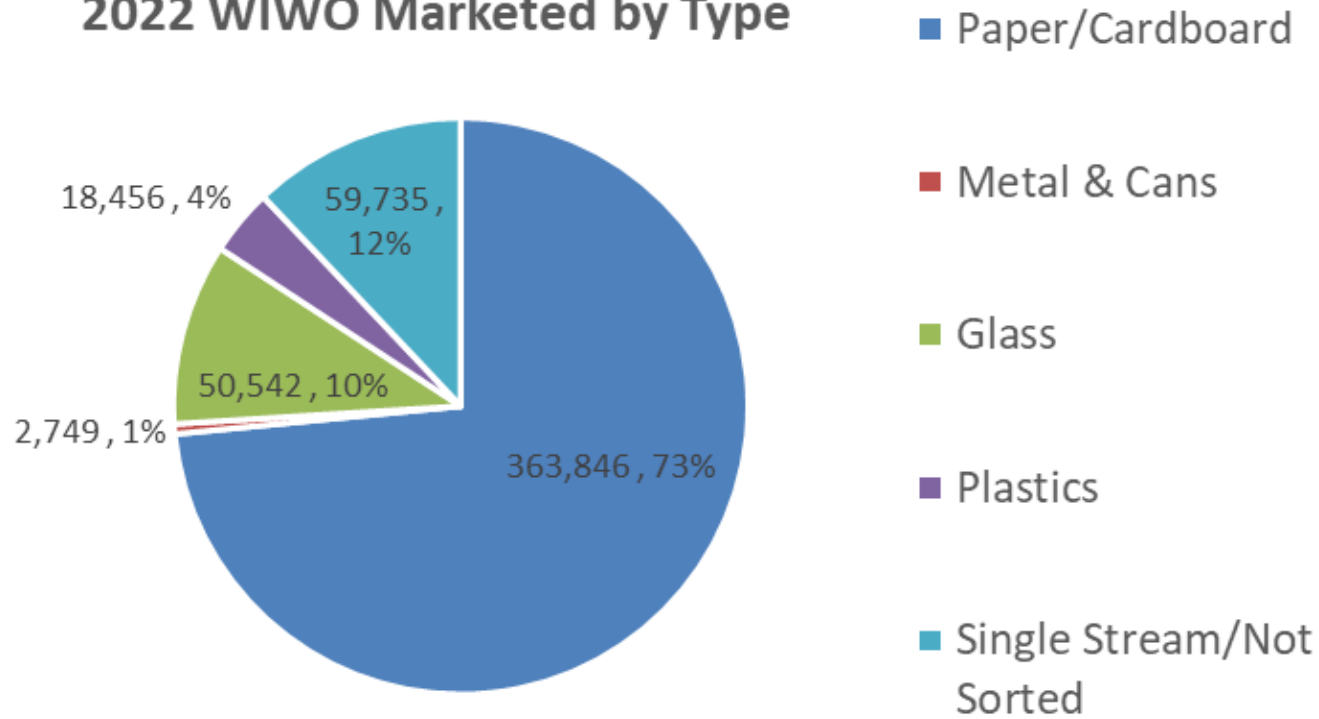
Bright Feeds in Berlin

NOTE: CHEMICAL RECYCLING

- Chemical recycling is an alternative to traditional “mechanical” recycling
 - **It is an umbrella term for several different types of technologies that break plastic down to its molecular components for recycling**
- There are no chemical recycling facilities in CT
- It is a nascent industry and we are still learning about the various types of technologies, their characteristics, and their outputs

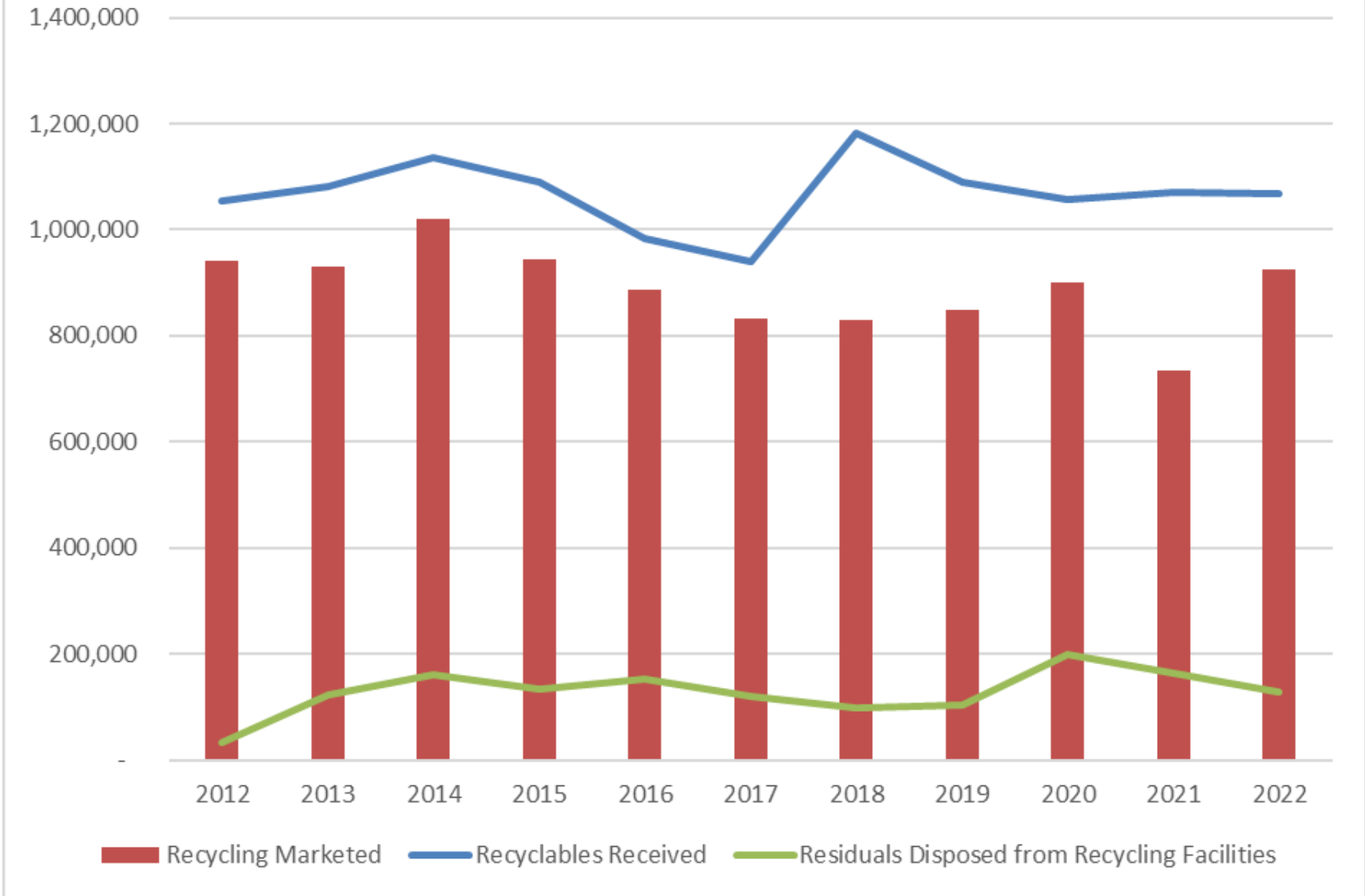
RECYCLING MARKETED 2022

2022 WIWO Marketed by Type

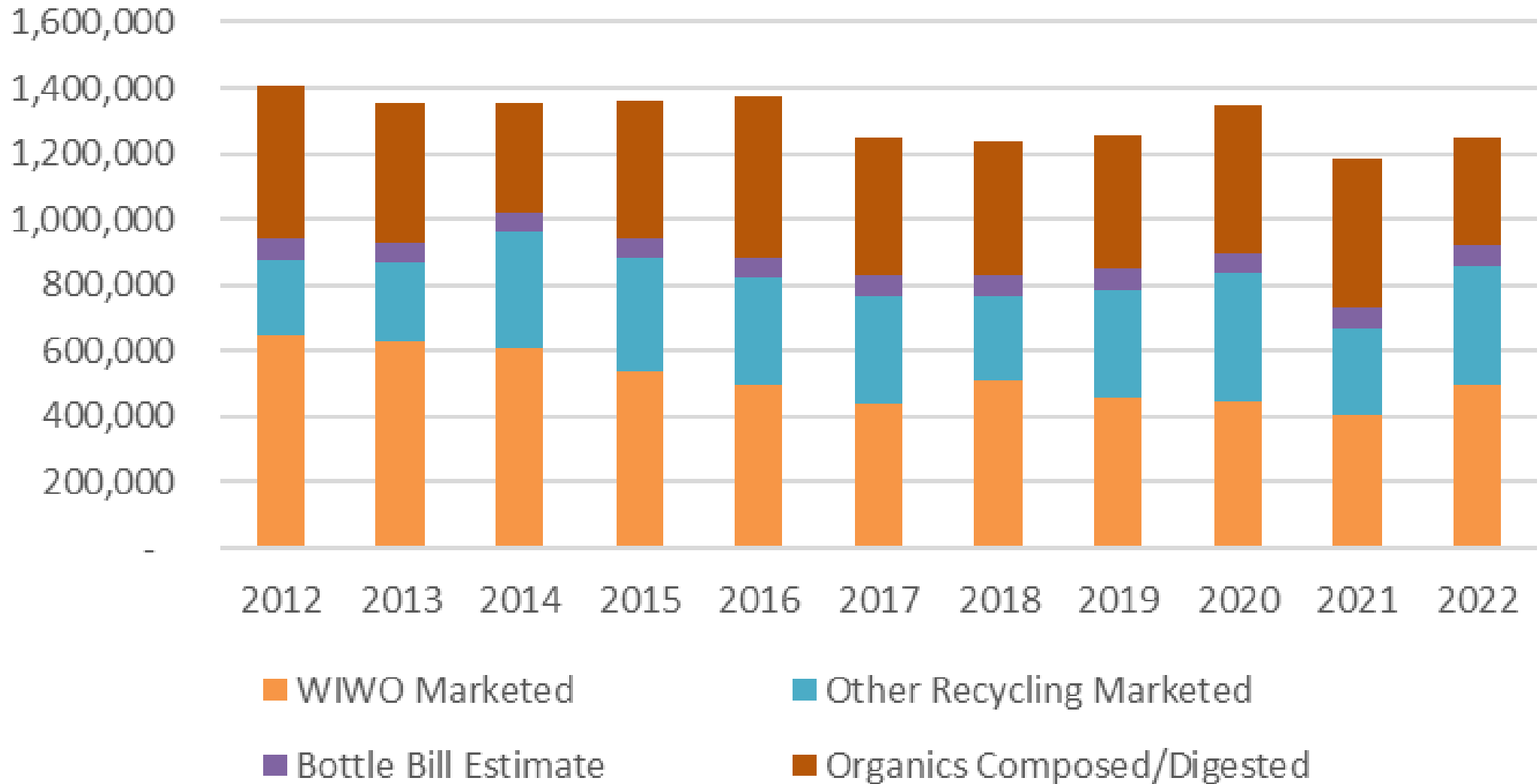


Non-WIWO Recycling/Composting	Tons Diverted 2022
Wood/Yard Waste	637,560
Food Residuals	26,392
Textiles	13,865
Electronics	2,046
Oil & Filters	1,789
Mattresses	633
Batteries	632
Plastic Film	285
Bulbs	162
Tires	148
Propane Tanks	14
Other	300

Recycling Received, Marketed, and Disposed

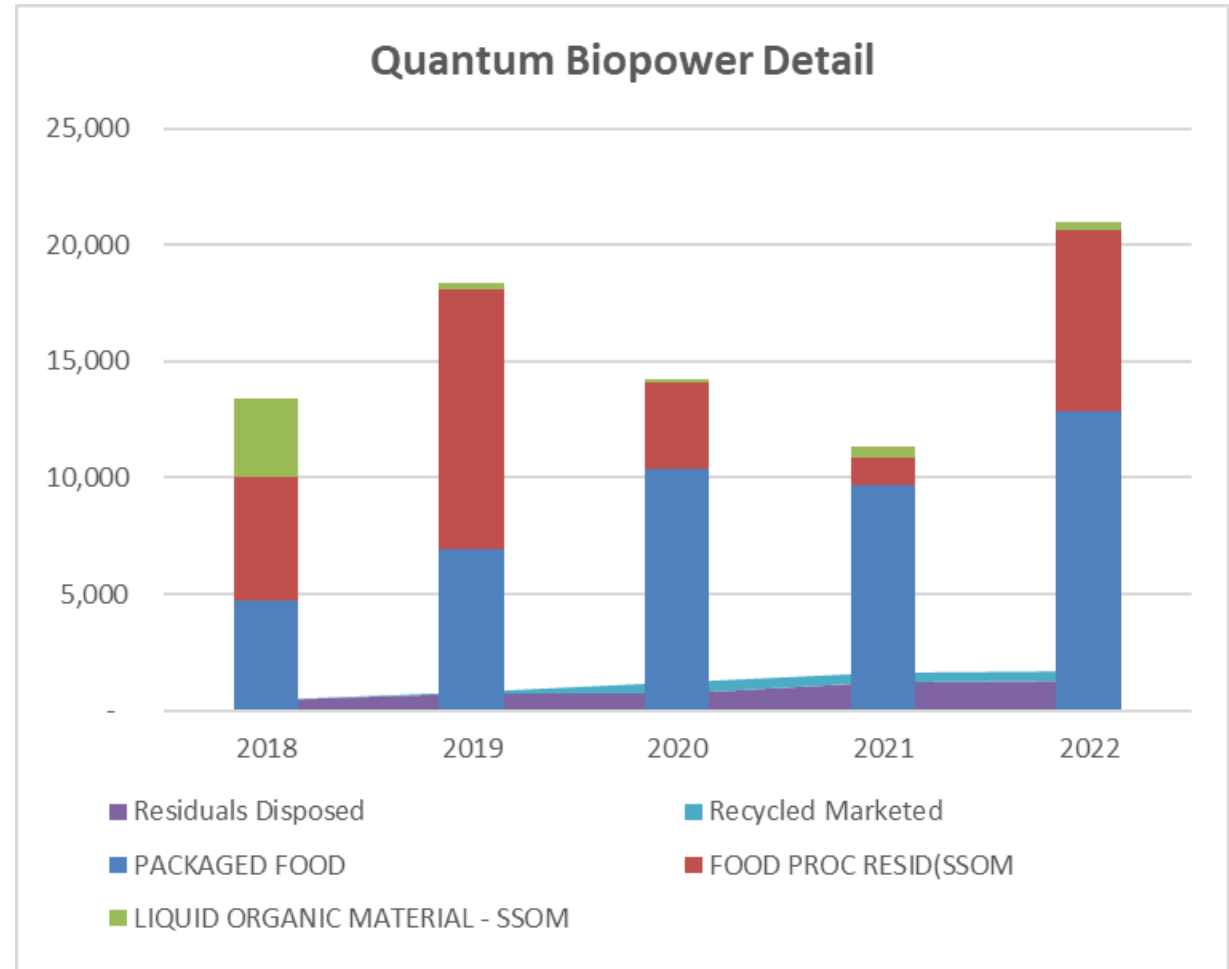
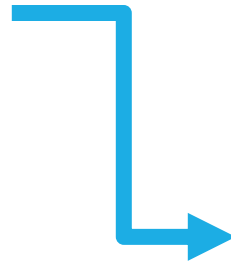


MSW Recycled & Composted



2022 FOOD SCRAPS DIVERTED

Facility	Tons Received
Quantum Biopower	20,999
Smart Feed Tech (Bright Feeds)	3,873
New Milford Farms	1,101
New England Compost	256
West Haven Composting Site	50
Blue Earth Compost	43
Municipal Composting/Mulching Sites	7
WeCare- Ellington	14



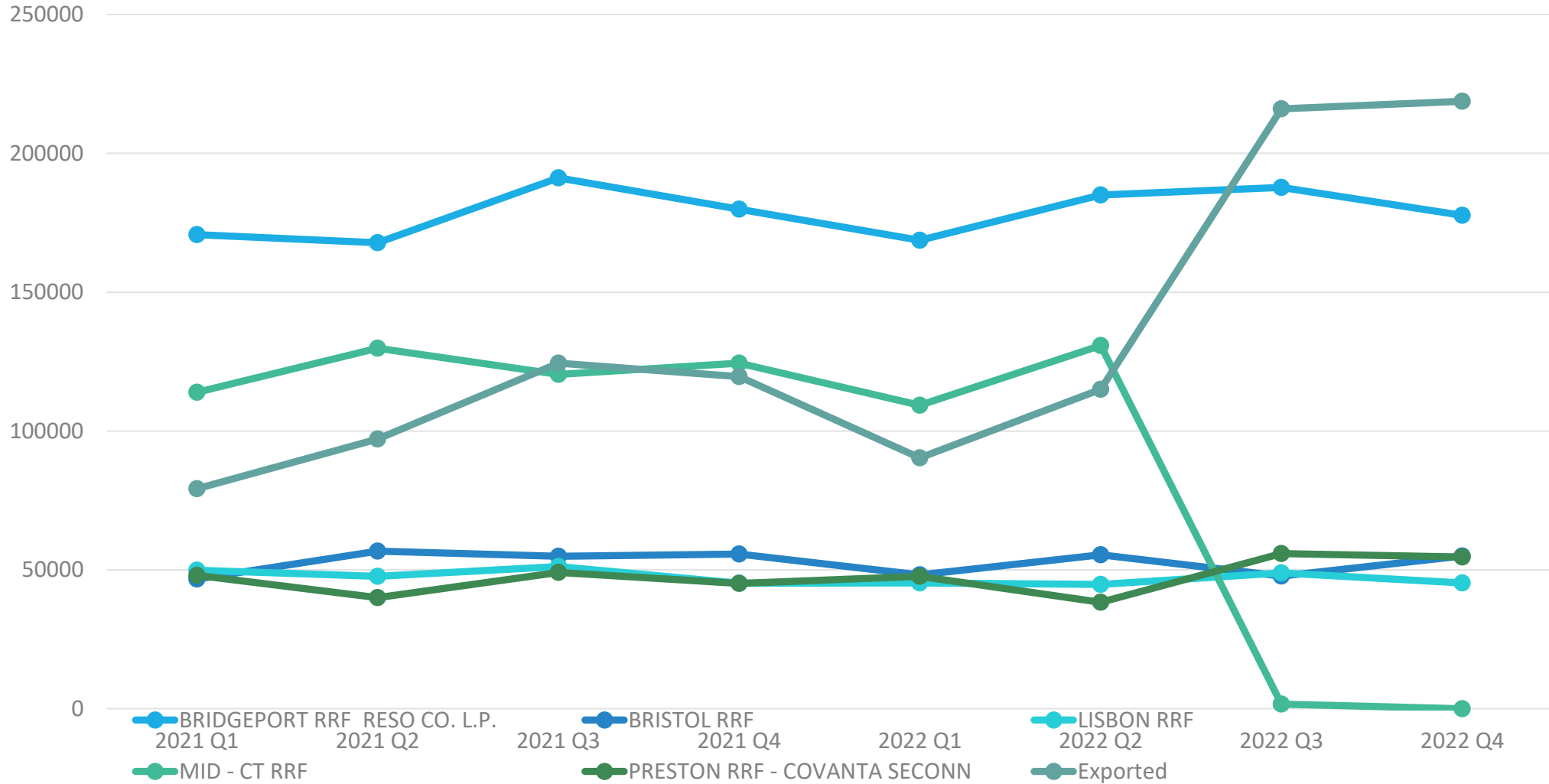
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Recent Changes to Solid Waste System

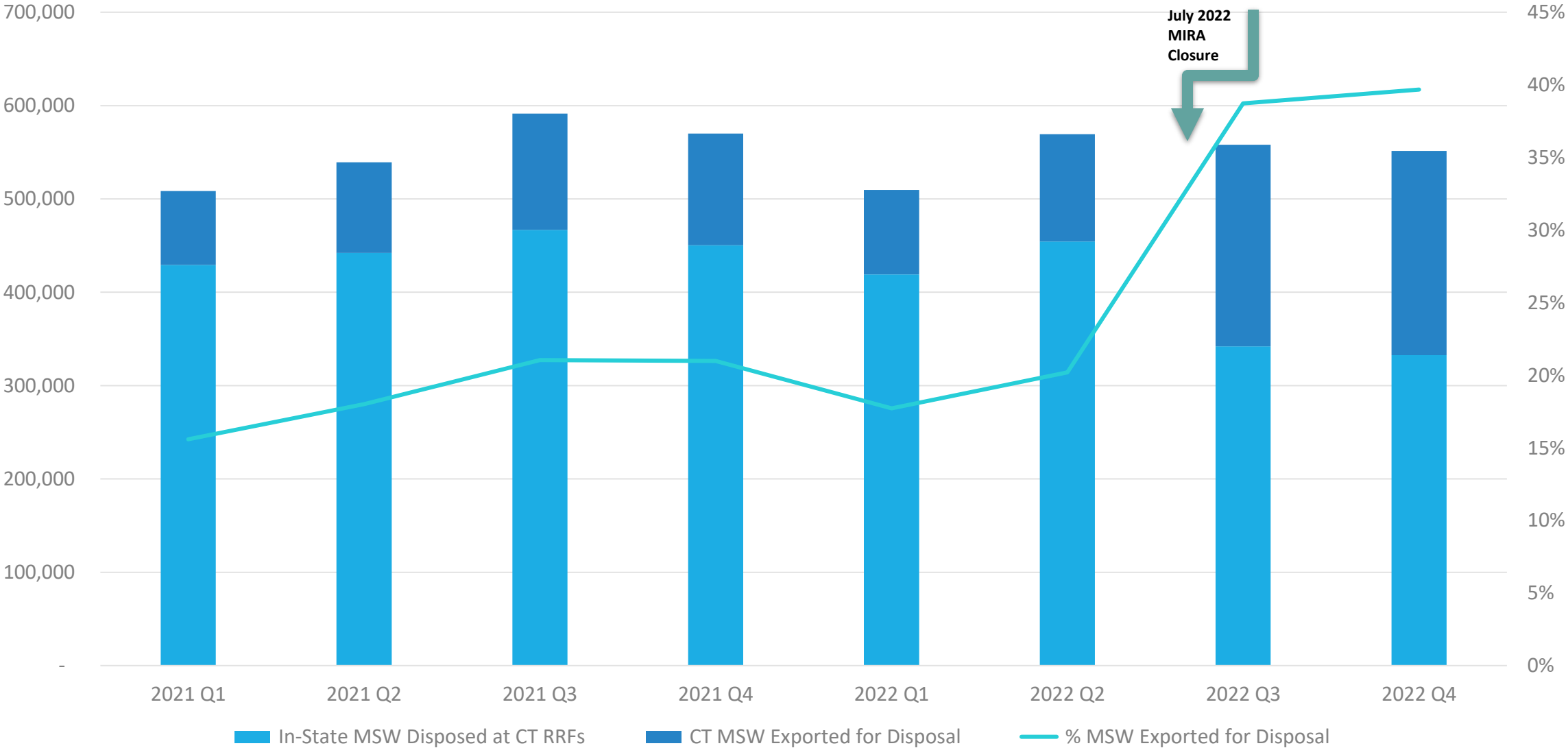
MIRA CLOSURE

- MIRA made the decision to cease waste-to-energy operations at its Hartford RRF in July 2022; the plant has not been accepting MSW since then
- There is nearly a 1:1 correlation between the quarterly MSW tons that MIRA had recently managed before ceasing operations and the increase in post-closure MSW tons being exported for disposal
- Tip fees for MSW disposal have risen significantly as export has increased in recent years – and with MIRA ceasing operations – and are expected to continue rising
- Recycling costs are also volatile, but there is less information available on how those costs are passed to municipalities and taxpayers

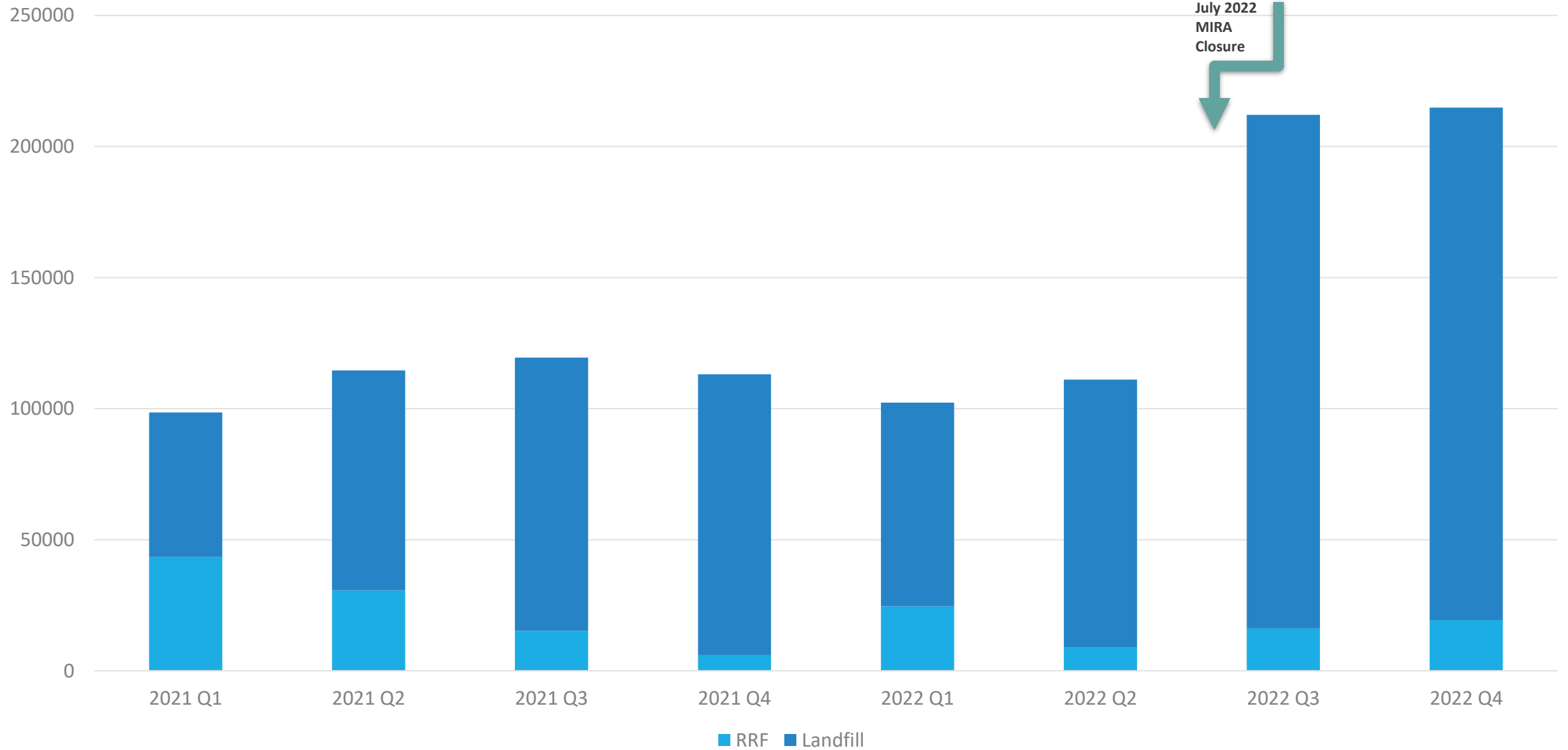
CT MSW Disposed by Facility



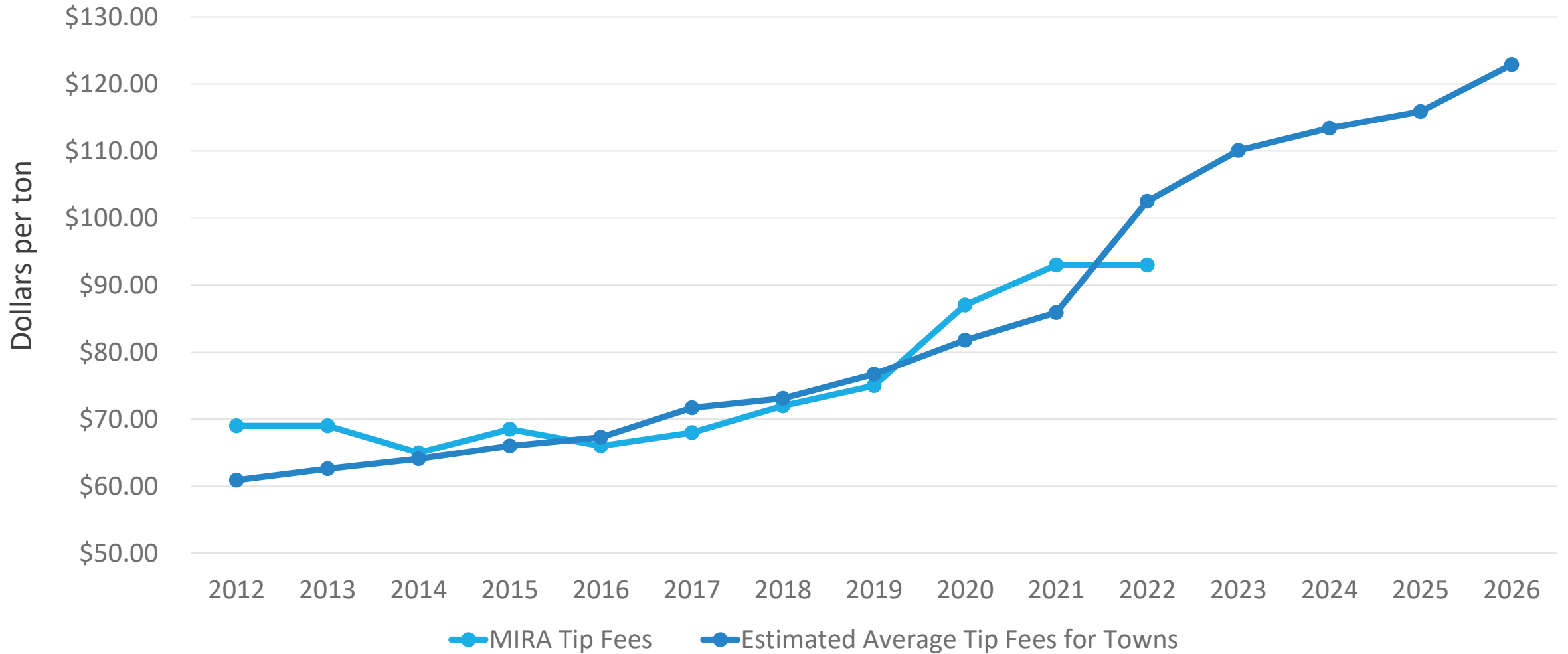
CT-Generated MSW Disposed by Quarter



Exported MSW Disposal Facility Type



MSW TIP FEES OVER TIME



A stylized landscape illustration. At the top right, a bright yellow sun is partially visible. Below it, a large green hill with a dark blue outline dominates the middle section. To the left, a smaller, lighter green hill is partially visible. At the bottom, a light blue area represents water, also outlined in dark blue. The text "Thank You" is centered in white on the green hill.

Thank You



Discussion

- MIRA Dissolution Authority – Joe DeNicola, CT DEEP



CEEJAC WASTE SUBCOMMITTEE— MIRA DISSOLUTION AUTHORITY

MDA – MIRA DISSOLUTION AUTHORITY

- New governance structure in place
 - 11 Directors, Bert Hunter, Chairperson
 - 5 Members identified and to be appointed by Hartford City Council
 - Meetings are open to the public and accessible on-line
- Immediate priorities:
 - Provide oversight and recommendations as needed to identify the immediate environmental needs and knowledge necessary for future redevelopment of the Authority's resource recovery facility site in South Meadows and engaging Hartford and other stakeholders with respect to the future of such site in accordance with Sections 9 (a) 1&2 of Public Act 23-170
 - Provide oversight and recommendations concerning the transition of Connecticut Solid Waste System facilities, contracts and operations to entities other than the Authority in accordance with Section 9 (a) 3 of Public Act 23-170.
 - Conserve cash reserves currently at \$55million
- First report to legislative committees in January, 2024
- Website is updated regularly and includes information on Board and other meetings:

[Home - MIRA \(ctmira.org\)](http://ctmira.org)



Discussion

- AB ECO Park – Gaby Frigon, CT DEEP

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Public Comment Period



Next Steps
Scheduling, Future Meetings