

State of Materials Management in Connecticut



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

State of Materials Management in Connecticut

Presentation for the Solid Waste Management Subgroup:
Diversion, Reduce, Reuse, Recycle

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Management and Compliance Assurance



Introduction

- Purpose of this presentation is informational – we want to ensure that the committee has the best and most up-to-date information on the materials management sector
- We have data through the 2021 calendar year
- Data comes from facilities that report to DEEP as required by RCSA 22a-209 and reflected in permit requirements
- Complete understanding of the impact of MIRA's decision to cease WTE operations in July 2022 will not be known for some time, but we can make reasonable high-level assumptions that can assist with policymaking

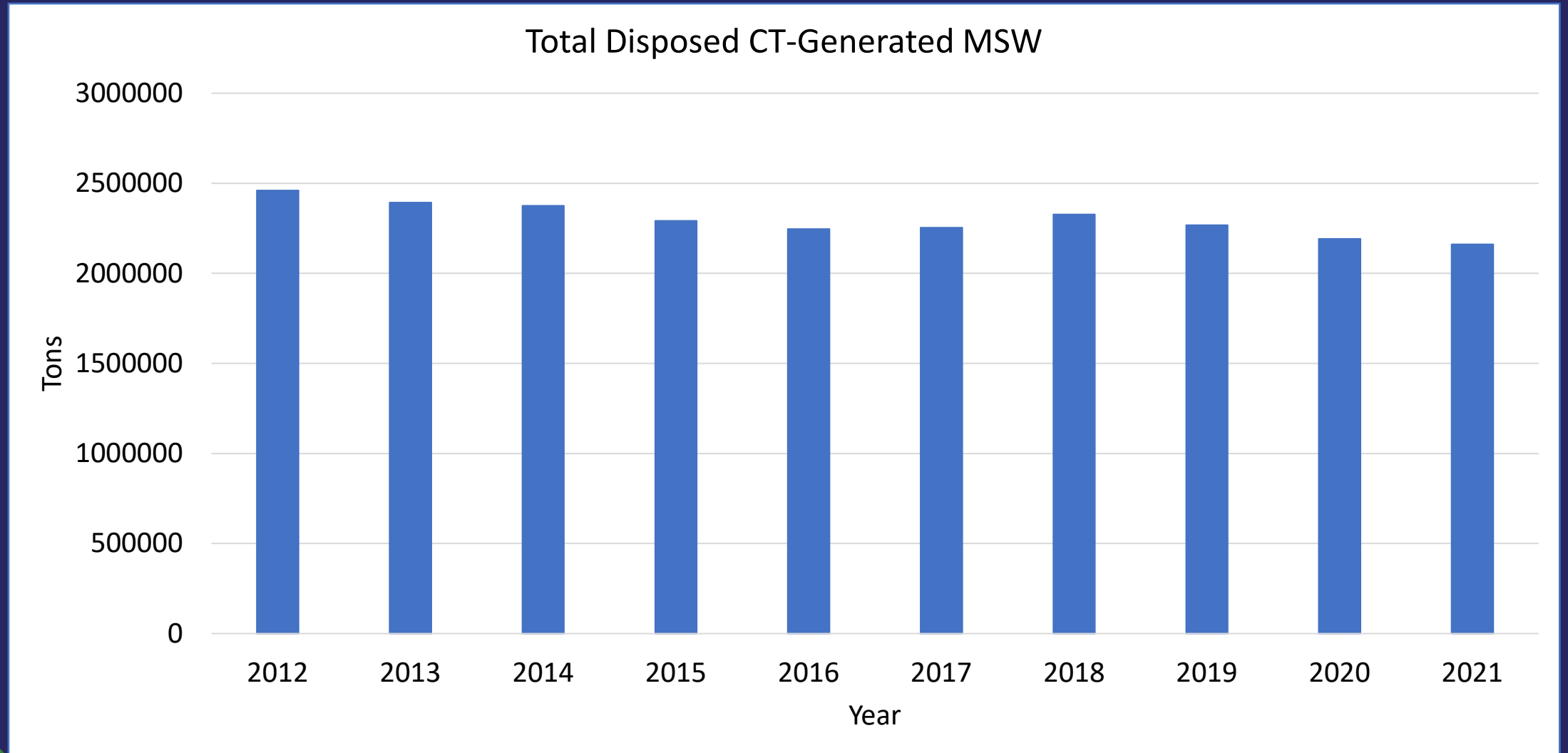


Data Limitations

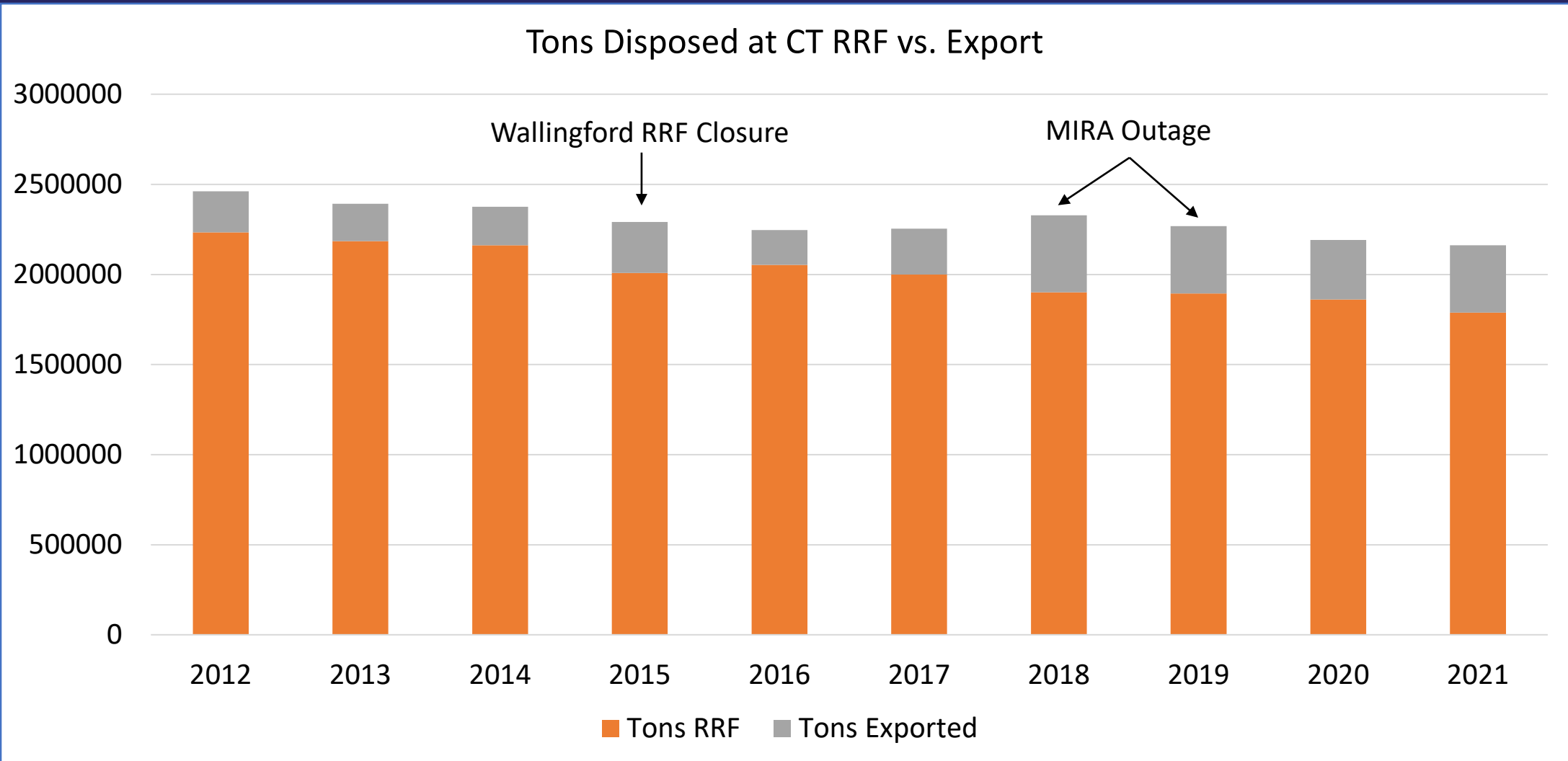
- ☞ Data is only as good as what's reported to us
- ☞ Don't have good data on bottle bill material that is redeemed
- ☞ MIRA closure not yet reflected in available data
- ☞ Data doesn't capture things like backyard composting, textile drop-off at donation centers, etc.



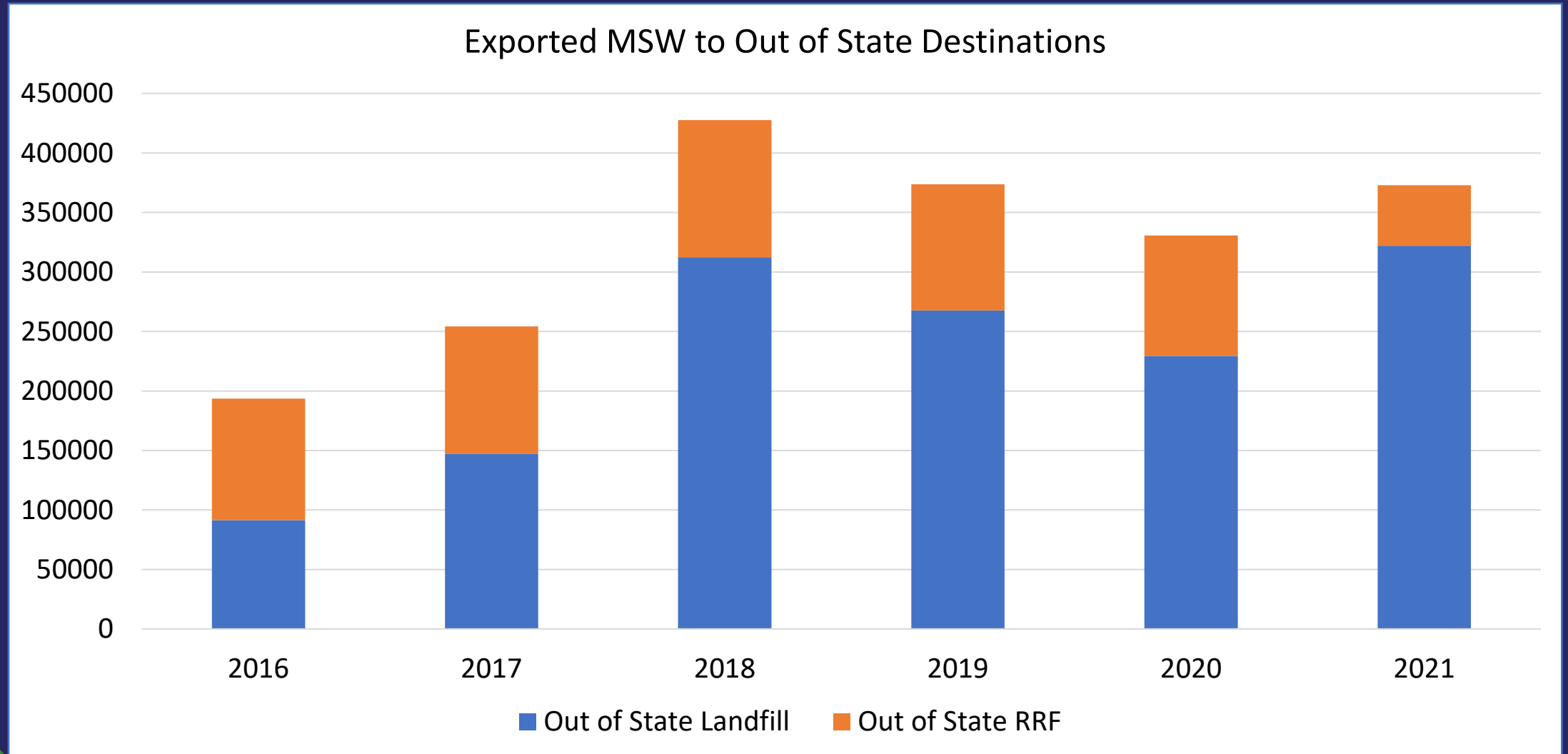
CT MSW Disposal 2012-2021



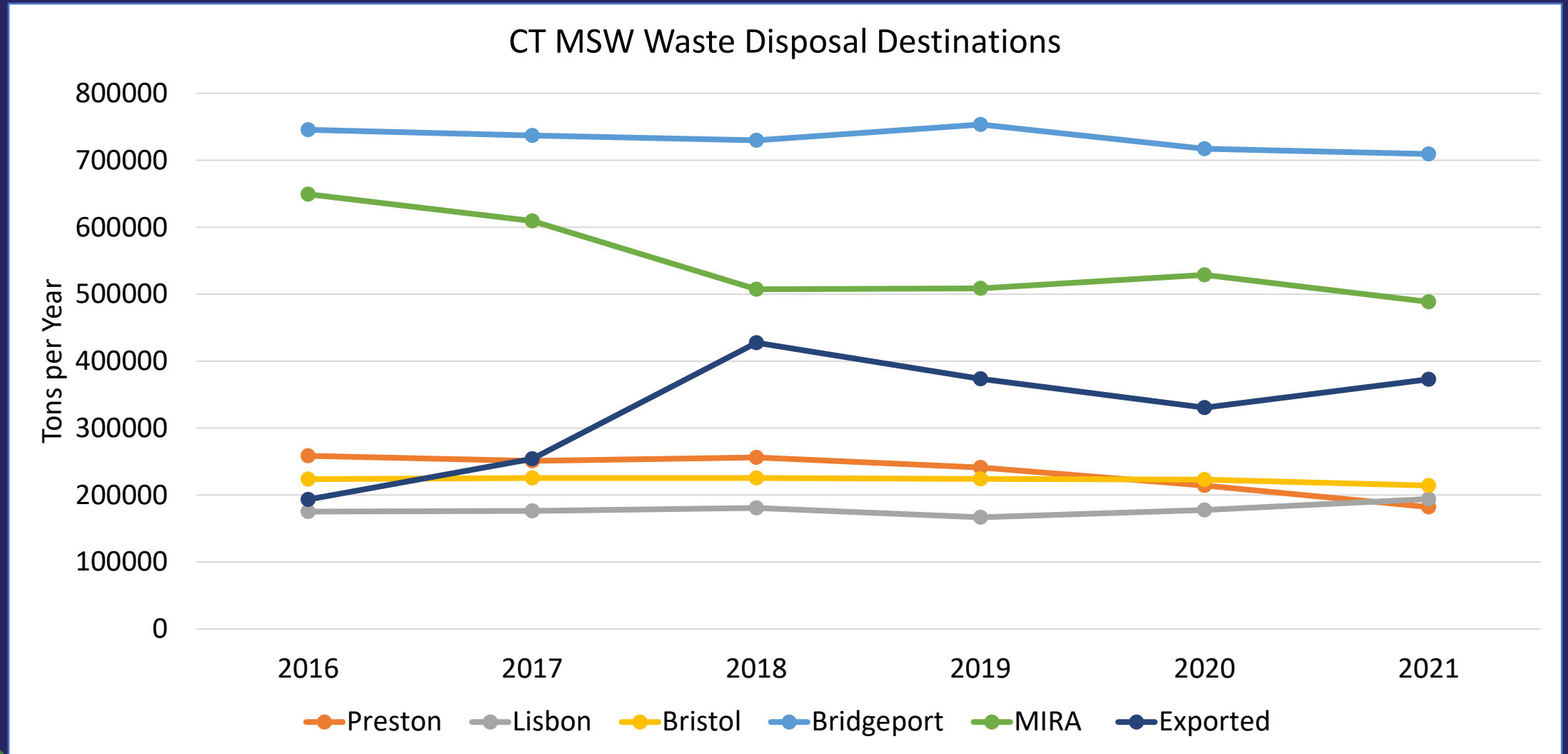
CT MSW Disposal 2012-2021



CT MSW Export 2016-2021

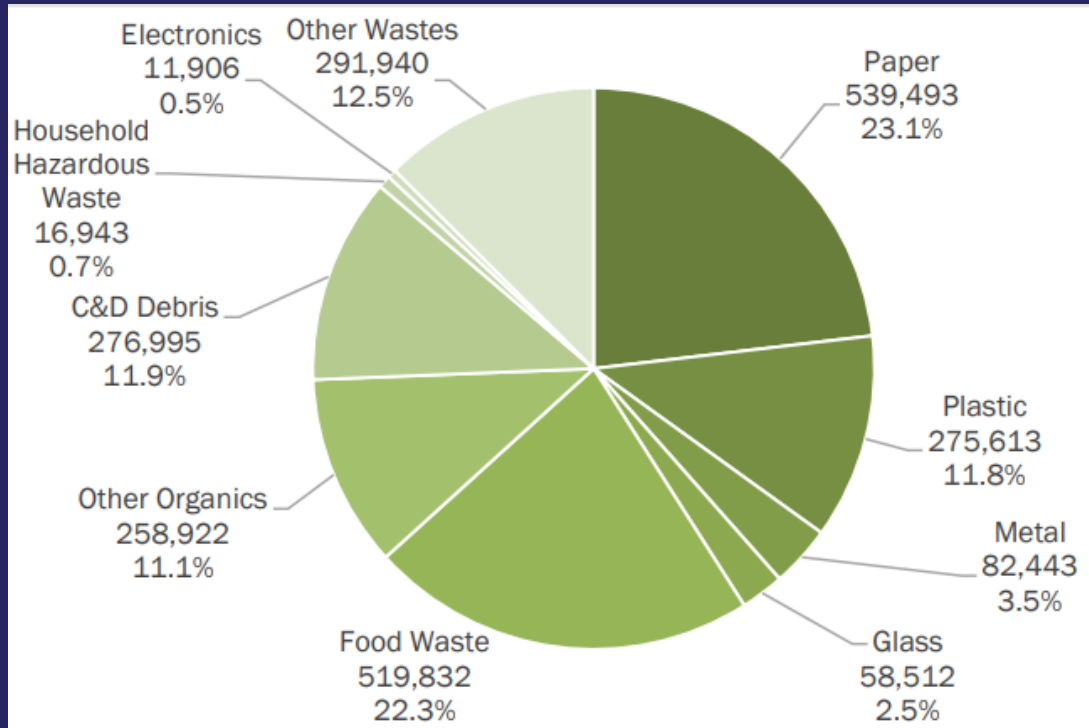


CT MSW Disposal Destinations 2016-2021

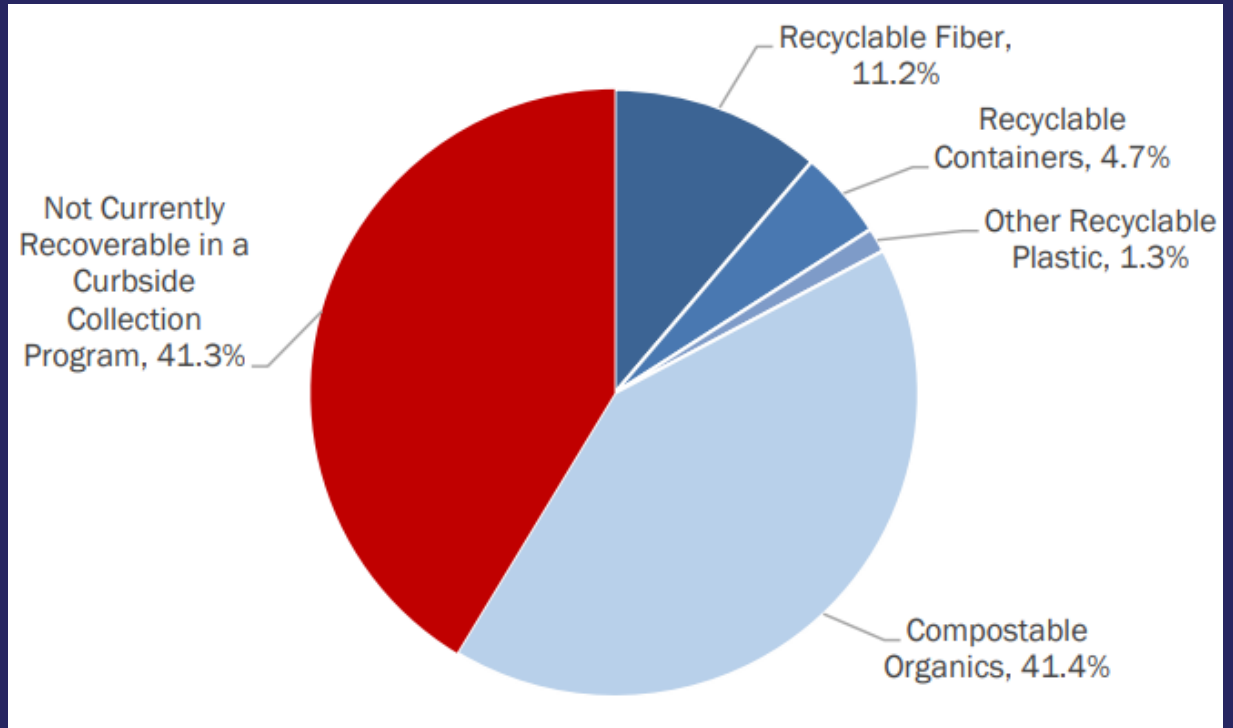


2015 Waste Characterization Study

MSW Composition

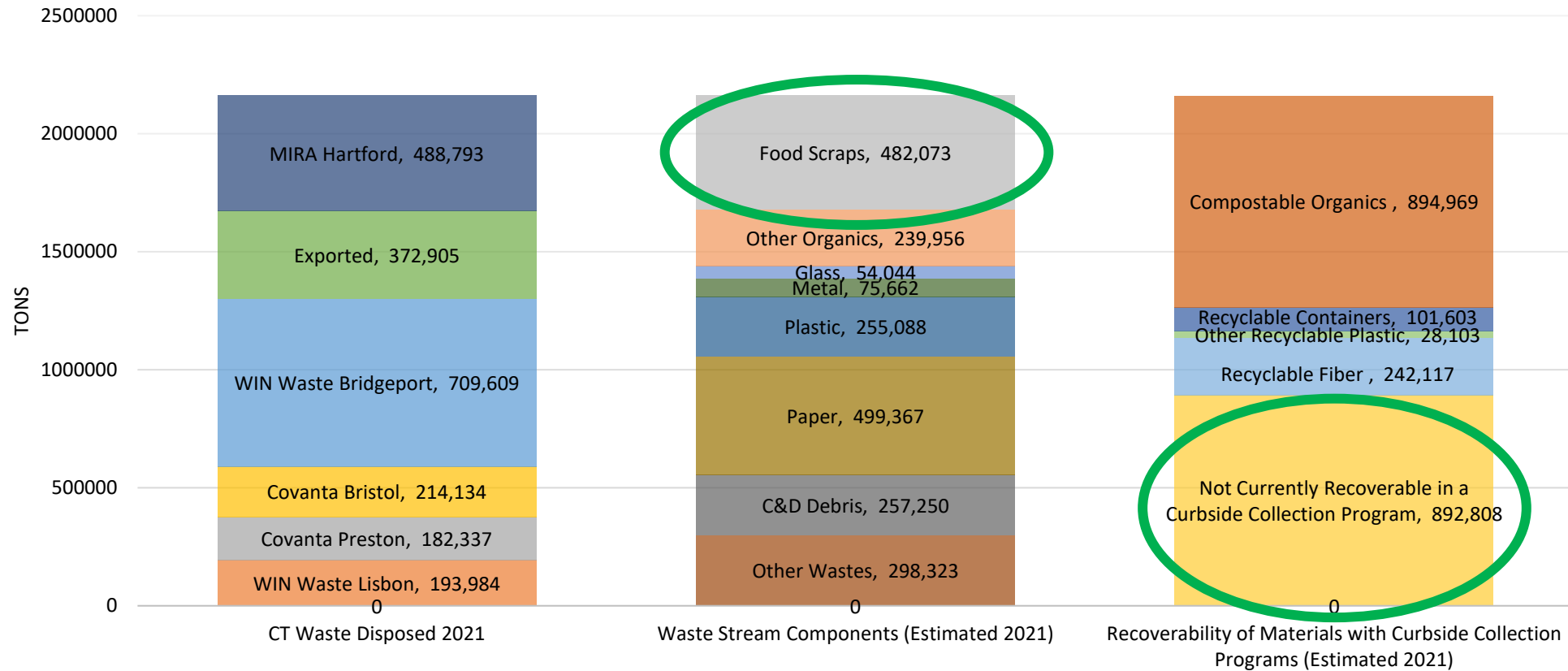


Recoverability of Disposed Waste in Existing Curbside/On-site Collection Programs

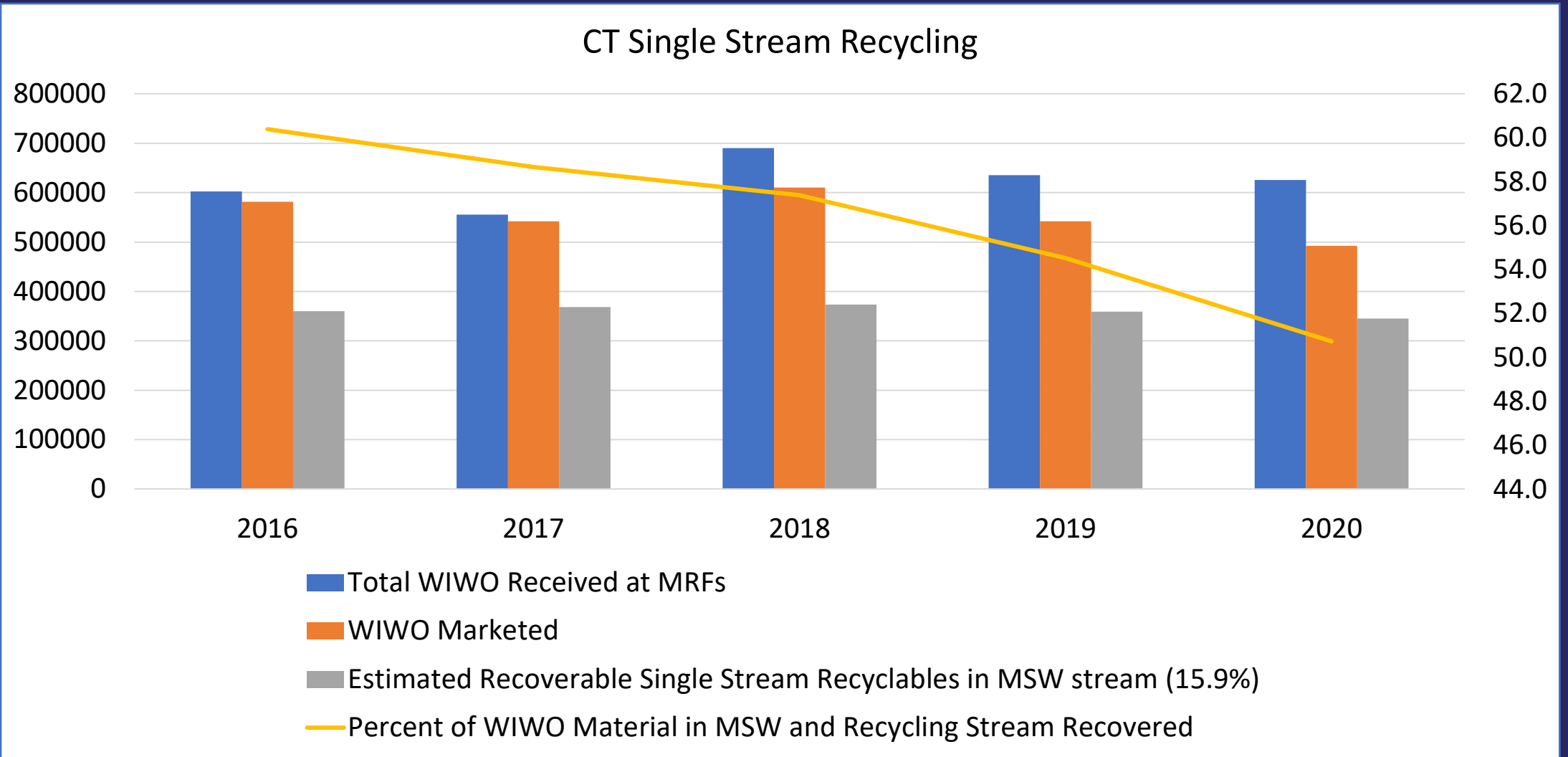


CT MSW Estimated Composition 2021

2021 CT WASTE ESTIMATED COMPOSITION AND RECOVERABILITY



CT Recycling 2016-2020

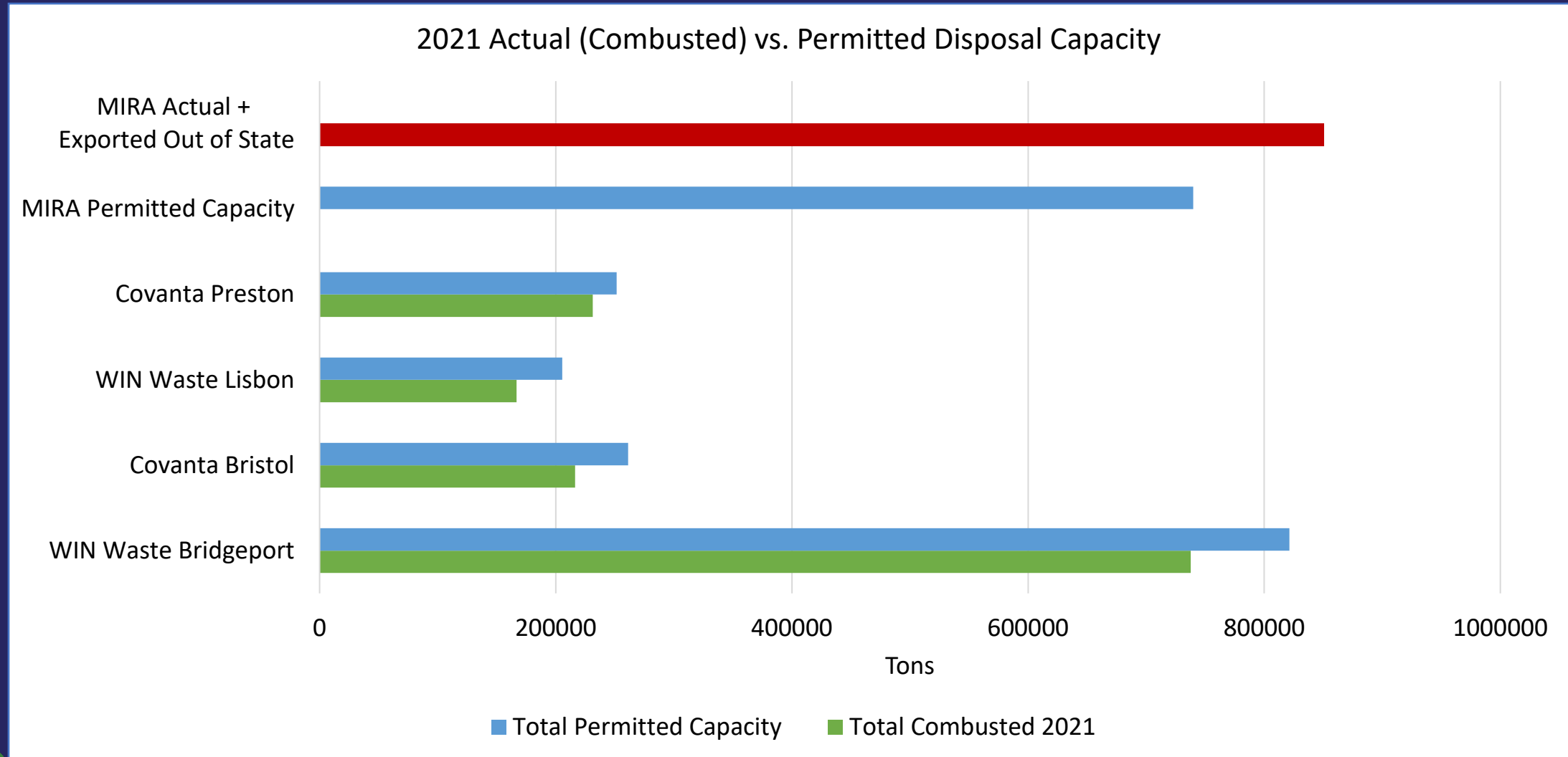


2021 Comparison with and w/o MIRA Capacity

All numbers in tons	2021	Hypothetical - 2021 with no MIRA RRF
CT MSW disposed of at in-state RRF	1,788,857	1,300,064
CT MSW disposed of out-of-state (total)	372,905	861,698
CT MSW to out-of-state landfill	322,037	741,060*
CT MSW to out-of-state RRF	50,868	120,638*
Subtotal: CT MSW disposed	2,161,762	2,161,762
CT MSW recycled (total)	944,906	944,906
CT MSW recycled through single stream	461,164	461,164
CT MSW recovered through the bottle bill (estimate)	70,361	70,361
Other CT MSW recycled	413,381	413,381
CT MSW composted (total)	226,482	226,482
CT MSW composted at AD	17,747	17,747
Other CT MSW composted	208,734	208,734
Subtotal: CT MSW recycled & composted	1,171,388	1,171,388
Total: CT MSW generated	3,333,149	3,333,179
CT's MSW Diversion Rate	35%	35%
Self-sufficiency deficit (i.e., percent of total CT MSW disposed that cannot be managed by in-state disposal capacity)	17%	40%
*Projected tonnage based on 2021 MSW disposal rates		



2021 Combusted MSW vs. Permitted Capacity

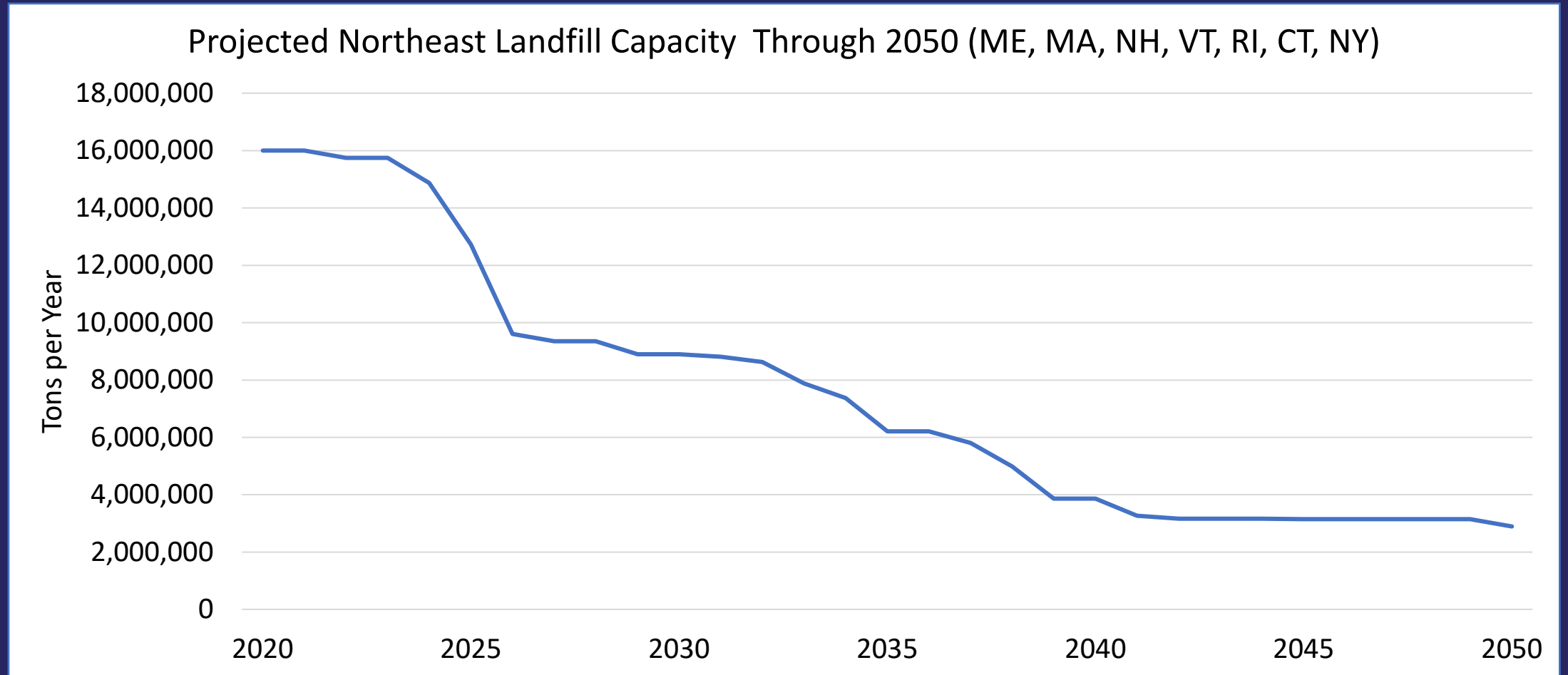


CT RRF Facility Info

Facility Ownership & Town	Permit to Construct Issued	Temp. Permit to Operate	Initial Issued Permit to Operate	Age	Capacity Max TPY Permitted for combustion
Covanta Bristol	9/12/1985	10/19/1987	5/10/1988	34 years	261,340 (716 TPD)
Covanta Preston	12/12/1988	12/2/1991	5/14/1993	29 years	251,485 (689 TPD)
WIN Waste Bridgeport	10/24/1985	NA	12/21/1988	34 years	821,250 (2,250 TPD)
WIN Waste Lisbon	3/18/1993	10/18/1995	9/27/1996	26 years	205,422 (562.8 TPD)
MIRA Hartford (no longer operational as of July 19, 2022)	2/11/1985	10/7/1987	11/14/1994	28 years (just for WTE activities; building has been utilized for power generation since the 1920s)	739,855 (2,027 TPD)

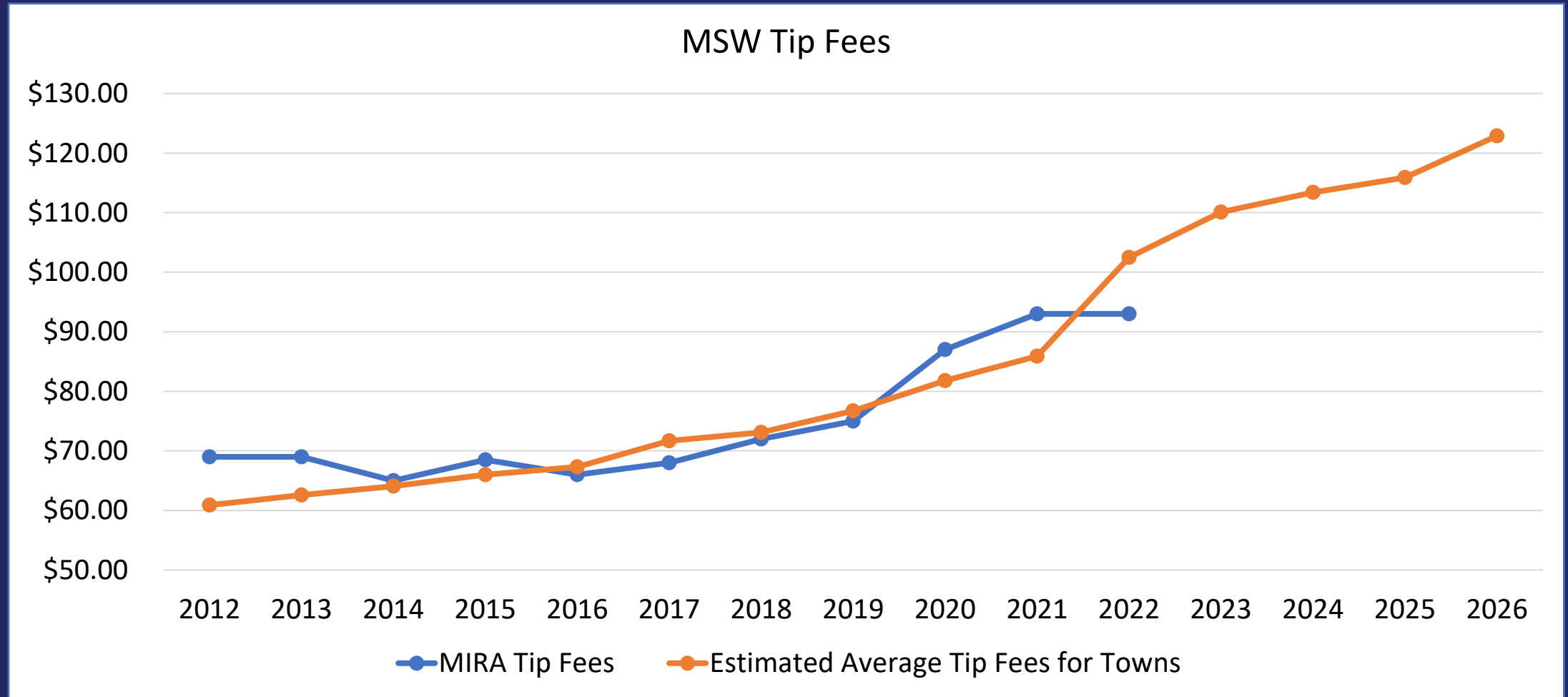


Projected NE Landfill Capacity



Sources: Report to the Joint Standing Committee on the Environment and Natural Resources, Maine Solid Waste Generation and Disposal Capacity Report, January 2017; NEW YORK STATE OFFICE OF GENERAL SERVICES, Material Recovery and Waste Reduction Program, ANNUAL REPORT, Fiscal Year 2007-08; BIENNIAL SOLID WASTE REPORT, OCTOBER 2019, Prepared by the New Hampshire Department of Environmental Services; MA Material Management Capacity Study February 11, 2019, MSW Consultants; via Waste Zero Presentation to CCSMM, October 28, 2020.

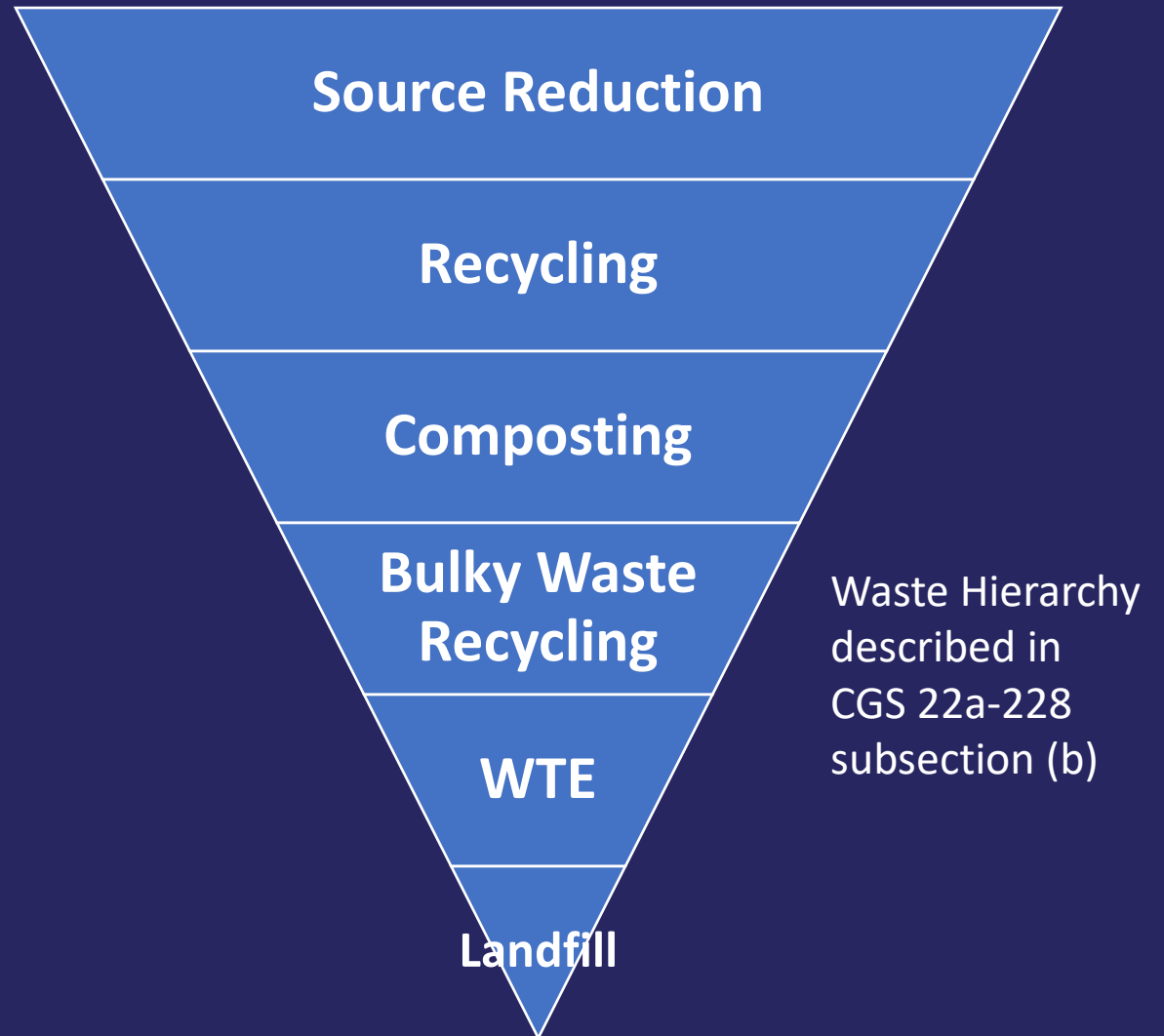
Tip Fees Over Time



MIRA tip fees retrieved from their website; estimated average tip fees for towns based on 15 executed municipal service agreements DEEP reviewed.

2016 Comprehensive Materials Management Strategy

- Improve the performance of municipal recycling programs and reduce waste, including increasing participation and compliance with mandatory recycling provisions
- Develop and improve recycling and waste conversion technologies
- Encourage corporations that design, produce, and market products to share responsibility for stewarding those materials in an environmentally sustainable manner (i.e., EPR for packaging)



Connecticut Coalition for Sustainable Materials Management

- DEEP initially joined with over 70 municipalities – now over 100 – to form the CCSMM in fall of 2020
- Four working groups were established to focus on specific areas of interest
 - Extended Producer Responsibility
 - Food Scraps/ Organics Collection & Diversion
 - Increase Reuse and Recycling
 - Unit-Based Pricing
- In December 2020, CCSMM released a Menu of Options
 - Many actions listed in menu have been implemented



Current Food Waste Diversion

- Have permitted capacity to accept up to estimated 328,077 tons of food waste
- However:
 - Some existing facilities, like Bright Feeds, are still scaling up operations
 - Some existing facilities, like Quantum BioPower, accept a lot of out of state food waste (permitted capacity is 112,320 TPY; received 17,747 tons of CT-generated food waste in 2021)
 - Other existing facilities are also permitted to take other types of organic waste – such as farm/animal waste, mixed yard waste, or ground clean wood – and currently take little to no food waste
- DEEP continues to increase and streamline permitting opportunities for the development of food waste collection and processing locations



SMM Grant Program

- Legislature has provided \$10 million over the past two years for the SMM Grant Program
- First round of grants – nearly \$5 million – awarded in October 2022 to 15 towns
- Grants will provide financial and technical assistance for start-up costs and implementation of food waste collection pilot programs, with some combined with UBP
- Intent is for these pilot programs to become scalable
- Legislature also provided for a recurring funding source for SMM Account that can be used for future grant rounds



2022 CMMS Amendment

- DEEP is drafting an amendment to the CMMS that further explains the self-sufficiency deficit and details strategies on how to address it
- Prioritizes maximizing the diversion strategies outlined in the 2016 CMMS, including EPR for Packaging and increased food waste diversion
- Lays out self-sufficiency scenarios based on level of implementation and success of diversion strategies
- Will put out a draft for public comment and input in the coming weeks



Conclusions

- CT generates approx. 2.2 million TPY of MSW that is disposed
- With the closure of the MIRA RRF, there is approx. 1.3-1.4 million TPY remaining “practical” capacity at CT RRFs
- Without MIRA, CT will ship approx. 40% of its MSW out of state
- There are significant opportunities to ramp up diversion to close this deficit



Questions?

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