

2022 Solid Waste Disposal & Diversion Report

State of Connecticut
Department of Energy & Environmental Protection



Contents

- Executive Summary 3
- Key Terms 4
- Introduction..... 6
- Connecticut Solid Waste Laws and Regulations 7
- Connecticut Solid Waste Diversion Goals 8
- Municipal Solid Waste By the Numbers..... 9
 - CT Municipal Solid Waste Disposed..... 9
 - MSW Diverted from Disposal 11
 - Single Stream Recycling 12
 - Bottle Bill Redemption System..... 12
 - Additional Recycling & Extended Producer Responsibility Programs13
 - MSW Composted..... 15
 - Recycling Residuals..... 15
 - MSW Overall Outlook & Progress Towards Diversion Goals 16
- Non-MSW By the Numbers..... 19
 - Bulky/Oversized, Landclearing & Special Waste Disposal 19
 - Non-MSW Recycled/Composted..... 19
- Appendix A: Data Qualifiers and Limitations for Annual Solid Waste Reports..... 20
 - General..... 20
 - MSW Disposal Data Qualifiers..... 20
 - Recycling/Composting Data Qualifiers:..... 20
 - Annual Municipal Recycling Report Participation 21
 - Recycling Facility Double-Counting 21
 - Non-MSW Data Qualifiers 21
- Appendix B: Annual Municipal recycling report participation..... 22

Executive Summary

In 2022, Connecticut generated 3.49 million tons of Municipal Solid Waste (MSW). Of the MSW generated, 1.55 million tons were disposed at in-state Resource Recovery Facilities (RRFs) and 640,000 tons were shipped out of state for disposal. Due to the mid-year closure of the Hartford Materials Innovation and Recycling Authority (MIRA) RRF facility, the Connecticut Department of Energy and Environmental Protection (DEEP) projects that 40% of Connecticut's MSW is now being shipped out of state for disposal.

Of the MSW generated, Connecticut diverted 1.3 million tons, or 37% of MSW generated, from disposal via recycling, composting, or anaerobic digestion. The 2022 disposal and diversion tonnages indicate an overall 42% diversion rate from the statutory 2005 baseline. Therefore, **Connecticut is not on track to meet its statutory goal of 60% diversion by 2024.**

Key Terms

Bottle Bill refers to the container redemption program set up through CGS [Sec. 22-244](#). The program works by charging a small deposit on a container at the time of purchase which is then returned to the consumer when the empty bottle is returned.

Comprehensive Materials Management Strategy (CMMS) refers to the 2016 roadmap to achieving the state's goal of 60% diversion of materials from disposal by 2024. It constitutes the revised statewide Solid Waste Management Plan called for in CGS [Sec. 22a-241a](#).

Composting is the process of accelerated biological decomposition of organic (carbon-based) material under controlled aerobic or anaerobic conditions (CGS [Sec. 22a-207 Definitions](#)). Anaerobic digestion is considered composting when the end products that are not energy are used beneficially, such as for animal bedding or soil amendment. For the purposes of this report, material composted is measured by the tonnage of certain compostable materials received at recycling/composting facilities.

Designated Recyclable Item means an item designated for recycling by the Commissioner of Energy and Environmental Protection in regulations adopted pursuant to subsection (a) of CGS section [22a-241b](#), or designated for recycling pursuant to CGS section [22a-208v](#) or [22a-256](#); Current designated recyclable items include: 1) glass and metal food containers; 2) residential and non-residential high grade white office paper; 3) old newspaper; 4) scrap metal; 5) old corrugated cardboard; 6) waste oil; 7) motor vehicle storage batteries (e.g. lead acid storage batteries); 8) Ni-Cd rechargeable batteries; 9) leaves; 10) grass clippings; 11) HDPE and PETE plastic containers; 12) boxboard; 13) magazines; and 14) colored ledger paper.

Extended Producer Responsibility (EPR) is a mandatory type of product stewardship required by law. It includes, at a minimum, the requirement that the manufacturer's responsibility for its product extends to post-consumer management of that product and its packaging.

Food Waste means food scraps, food processing residue and soiled or unrecyclable paper that has been separated at the point or source of generation from nonorganic material.

Materials Innovation and Recycling Authority (MIRA) MIRA was originally created under Public Act 14-94 in June 2014 as successor to the former Connecticut Resources Recovery Authority (CRRA). The MIRA Dissolution Authority assumed control over MIRA's assets, rights, duties and obligations effective July 1, 2023. MIRA was, and the MIRA Dissolution Authority now is, a public instrumentality and political subdivision of the State engaged in specifically defined waste management service functions.

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 section [22a-115](#), land-clearing debris, demolition debris, biomedical waste, sewage sludge and scrap metal (CGS [Sec. 22a-207 Definitions](#)).

Product Stewardship is the act of minimizing the health, safety, environmental, and social impacts of a product and its packaging throughout all lifecycle stages, while also maximizing economic benefits. The manufacturer, or producer, of the product has the greatest ability to minimize adverse impacts, but other stakeholders, such as suppliers, retailers, and consumers, also play a role. Stewardship can be either voluntary or required by law.

Resource Recovery Facility (RRF) means a facility that combusts municipal solid waste to generate electricity, also referred to as a Waste-to-Energy (WTE) facility.

Recycling Residuals are contaminants in the recycling stream that are removed and disposed of.

Recycling means the processing of solid waste to reclaim material therefrom (CGS [Sec. 22a-207 Definitions](#)). For the purposes of this report, an item is considered recycled if the reporting entity markets the material for recycling.

Self-Sufficiency Deficit refers to the tonnage or percentage of total MSW disposed that is shipped out of state to be disposed.

Single Stream Recycling refers to the materials that are universally accepted in Connecticut recycling programs. Items included in the single stream are also known as ‘[What’s In What’s Out](#)’ (WIWO) items. Current items accepted in the single stream include rigid plastic bottles and containers, cardboard and boxboard, food and beverage cartons, paper, aluminum foil, metal cans and bottles, glass food and beverage bottles and jars.

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 Resource 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.

Waste Conversion Facility means a facility that uses thermal, chemical or biological processes to convert solid waste, including, but not limited to, municipal solid waste, into electricity, fuel, gas, chemical or other products and that is not a facility that combusts mixed municipal solid waste to generate electricity (CGS [Sec. 22a-207 Definitions](#)).



Introduction

The 2022 Solid Waste Disposal & Diversion Report is intended to quantify the management of solid waste materials generated within the state of Connecticut during the 2022 calendar year. The report provides insight into current waste management practices, analyzes trends, and measures progress towards statutory waste reduction targets. This report provides statewide aggregates based primarily on data submitted by permitted solid waste facilities and transfer stations within the state and supplemented by municipal reporting.

According to the Solid Waste Management Strategy laid out in the 2016 Comprehensive Materials Management Strategy (CMMS), Connecticut should have sufficient in-state capacity for recycling, processing, and disposal to manage waste generated within the state.¹ In recent decades, Connecticut maintained self-sufficiency through a combination of diversion of waste through recycling and composting and maintaining in-state disposal Resource Recovery Facility (RRF) capacity. In July 2022, MIRA ceased operations at the Hartford RRF, causing a loss of 739,855 TPY (or roughly one-third) of permitted in-state disposal capacity and an estimated 40% of waste to be shipped out of state.

¹ 2016 Comprehensive Materials Management Strategy

Connecticut Solid Waste Laws and Regulations

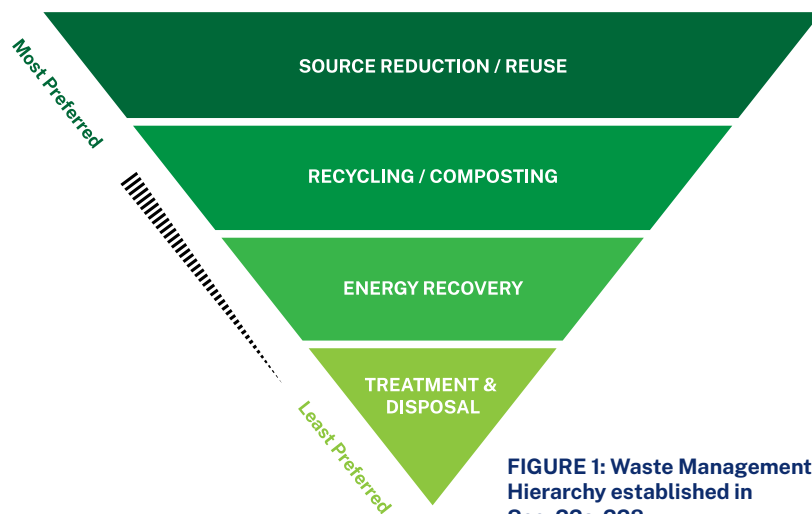
Several Connecticut laws and regulations shaped the solid waste management system of 2022. CGS [Sec. 22a-228](#) establishes a solid waste management plan (CMMS) and a hierarchy that places diversion as a higher priority than disposal and resource recovery/waste-to-energy as a higher priority than landfilling.

CGS [Sec. 22a-241b](#) designates recyclable items as mandatory to divert from disposal. Current designated recyclable items include: 1) glass and metal food containers; 2) residential and non-residential high grade white office paper; 3) old newspaper; 4) scrap metal; 5) old corrugated cardboard; 6) waste oil; 7) motor vehicle storage batteries (e.g. lead acid storage batteries); 8) Ni-Cd rechargeable batteries; 9) leaves; 10) grass clippings; 11) HDPE and PETE plastic containers; 12) boxboard; 13) magazines; and 14) colored ledger paper.²

In 1980, Connecticut adopted a ‘[Bottle Bill](#),’ or container redemption program, that established a \$0.05 refund value for certain containers. Water bottles were added to the list of covered beverages in 2009. 2021 legislation expanded the list of covered beverages starting in 2023 and increased the deposit value to \$0.10 per covered container on January 1, 2024. Detailed data with redeemed container weights is not collected through this process, and therefore this report uses estimates based on a waste characterization to approximate tonnages associated with containers redeemed through the Bottle Bill.³

The [Commercial Organics Recycling Law](#) mandates that large commercial entities that generate a projected annual volume of 26 tons or more per year of source-separated organic materials and are located not more than 20 miles from an authorized composting facility must separate such materials from other solid waste and ensure that such materials are recycled.⁴ This law may have influenced increasing food scraps diverted from disposal, as the tonnage requirement for diversion was lowered to 26 tons/year in 2022 from 52 tons/year (2020) and 104 tons/year (2014).

Waste Management Hierarchy



Connecticut has several laws establishing Extended Producer Responsibility (EPR) programs for select materials. Materials currently covered under EPR include paint,⁵ mattresses,⁶ electronic devices,⁷ mercury thermostats,⁸ and most recently gas cylinders (going into effect 2024)⁹ and tires (expected to go into effect 2025).¹⁰

² https://www.cga.ct.gov/current/pub/chap_446d.htm#sec_22a-241b

³ CGS Sec. 22a-244: https://www.cga.ct.gov/current/pub/chap_446d.htm#sec_22a-244

⁴ CGS Sec. 22a-226e: https://www.cga.ct.gov/current/pub/chap_446d.htm#sec_22a-226e

⁵ CGS Sec. 22a-904a: https://cga.ct.gov/current/pub/chap_446z.htm#sec_22a-904a

⁶ CGS Sec. 22a-905: https://cga.ct.gov/current/pub/chap_446z.htm#sec_22a-905

⁷ CGS Sec. 22a-629-641: https://cga.ct.gov/current/pub/chap_446n.htm

⁸ CGS Sec. 22a-625a: https://cga.ct.gov/current/pub/chap_446m.htm#sec_22a-625a

⁹ CGS Sec. 22a-905h: https://www.cga.ct.gov/current/pub/chap_446z.htm#sec_22a-905h

¹⁰ H.B. 6486: C G A – Connecticut General Assembly

Connecticut Solid Waste Diversion Goals

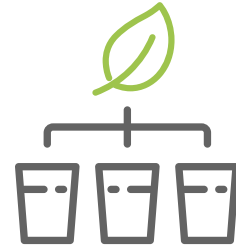
CGS Sec. 22a-241a establishes a goal of 60% diversion of Municipal Solid Waste (MSW) by 2024. According to the 2016 Comprehensive Materials Management Strategy (CMMS), to achieve the diversion goal, Connecticut must divert at least 2.3 million tons from annual disposal (using FY2005 3.8 million tons in MSW generation as baseline).¹¹ From 2005 to 2015, Connecticut reduced annual generation of MSW by approximately 200,000 tons, to a total of 3.6 million tons, leaving 2.1 million tons to be diverted. According to the 2016 CMMS, this can be achieved under the following conditions:



A reduction in annual MSW generation by 360,000 tons (10 percent of 3.6 million tons)



The reuse, recycling, and composting of 1.46 million tons of materials (45 percent of remaining 3.24 million tons)



The use of newly developed waste conversion processes, including anaerobic digestion, to manage at least 300,000 tons that would otherwise be disposed via traditional waste-to-energy or landfill

If these conditions are met, approximately 1.48 million tons of MSW will remain to be disposed via traditional waste-to-energy or landfill. Meeting this goal will allow approximately 90% of CT's MSW to be managed in-state.

Municipal Solid Waste By the Numbers

Municipal Solid Waste (MSW) means solid waste from residential, commercial, and industrial sources, excluding solid waste consisting of significant quantities of hazardous, land-clearing debris, demolition debris, biomedical waste, sewage sludge and scrap metal.

CT Municipal Solid Waste Disposed

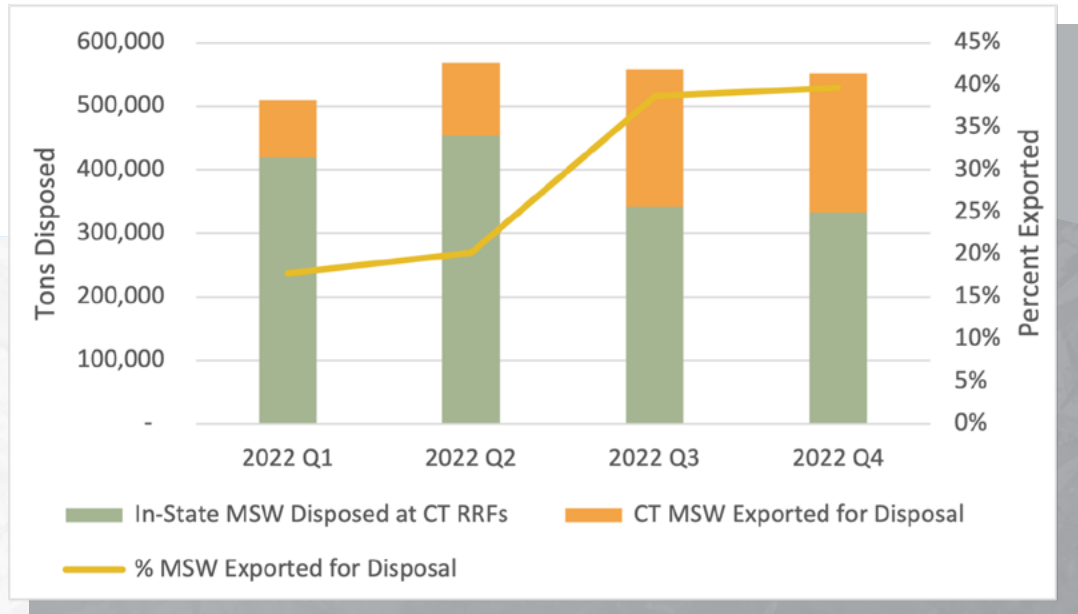
In 2022, Connecticut disposed nearly 2.2 million tons of MSW. Of that, about 1.55 million tons were disposed at in-state Resource Recovery Facilities (also known as Waste-to-Energy Facilities, or RRFs), about 570,000 tons were shipped to out of state landfills, and about 70,000 tons were shipped to out of state RRFs.

The 1.55 million tons disposed in-state are managed at the following RRFs: Wheelabrator Bridgeport RRF, Wheelabrator Lisbon RRF, Covanta Bristol RRF, and Covanta Southeastern Connecticut (Preston) RRF. In addition to managing waste generated in-state, each RRF accepts waste from out-of-state for disposal, totaling about 45 thousand tons in 2022.

TABLE 1: MSW Reported Received at Connecticut Resource Recovery Facilities from in-state and out-of-state in 2022.

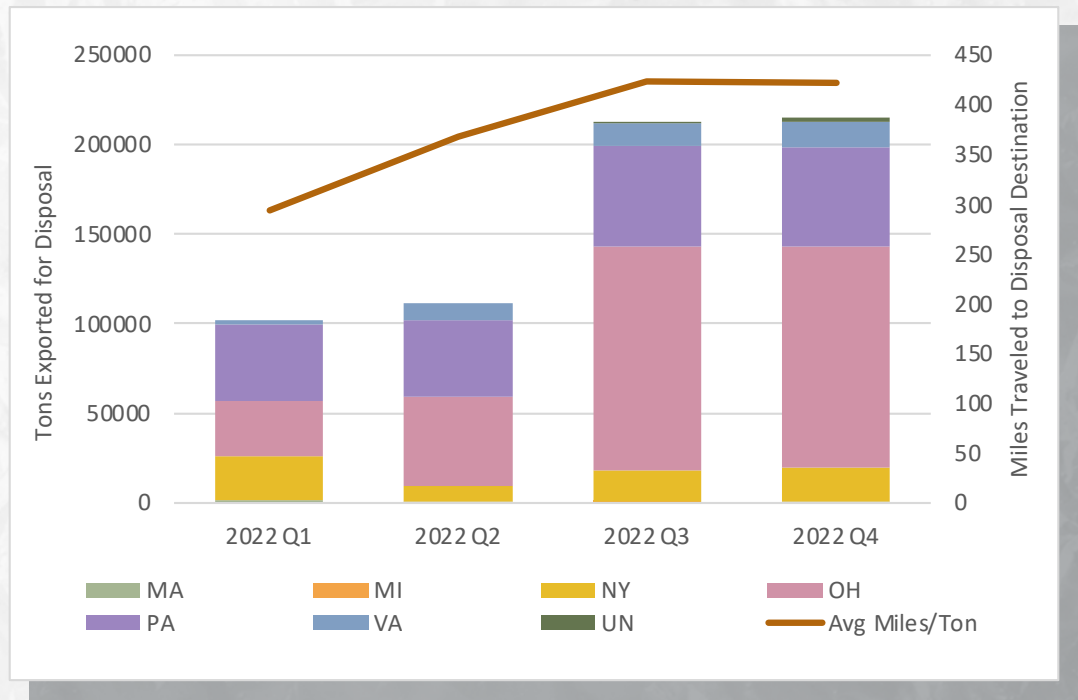
Disposal Facility	Tons MSW Accepted from Connecticut	Tons MSW Accepted from Out-of-State	Total Tons MSW Received 2022
Wheelabrator Bridgeport RRF	699,950	4,070	704,020
Covanta Bristol RRF	205,981	261	206,242
Wheelabrator Lisbon RRF	178,353	9,841	188,194
MIRA Hartford RRF (Mid CT Project)	241,192	1,978	243,170
Covanta Southeastern CT (Preston) RRF	200,140	33,212	233,352

FIGURE 2: CT MSW disposed in-state and exported for disposal by quarter in 2022.



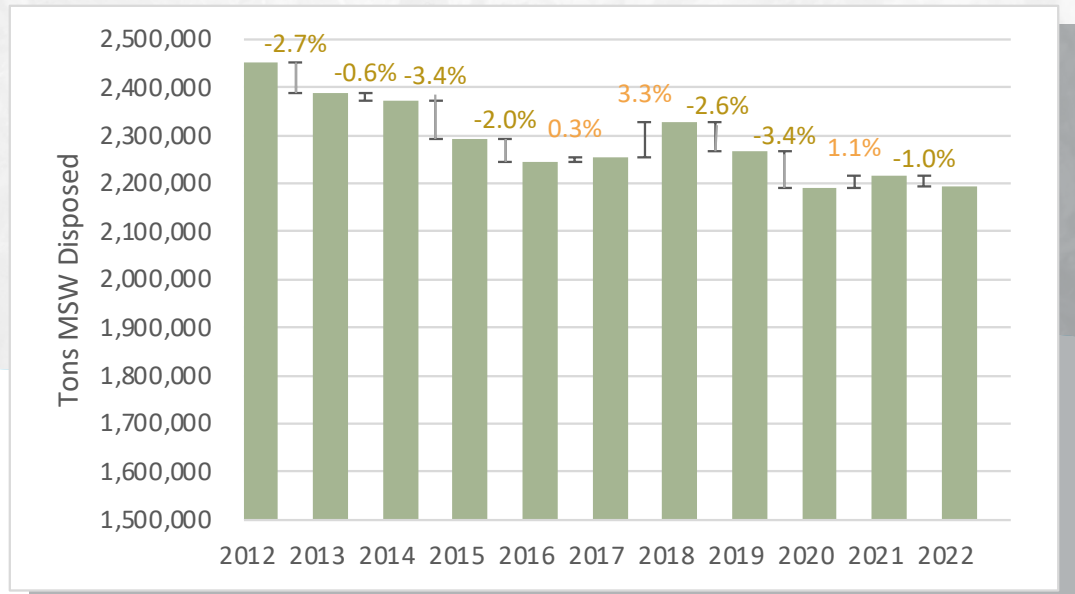
In 2022, CT exported MSW to six states including Massachusetts, Michigan, New York, Ohio, Pennsylvania, and Virginia, traveling an estimated average of nearly 400 miles per ton. Some tonnage is also reportedly exported to unknown out-of-state disposal destinations (not included in calculations for average miles per ton shipped). MSW disposed out of state is bound primarily for landfills in Pennsylvania and Ohio, with an increasing portion being sent to Virginia. Of the MSW exported for disposal, only 11% was sent to RRFs, while 89% were disposed in landfills.

FIGURE 3: States receiving MSW exported from CT and average miles traveled per quarter.



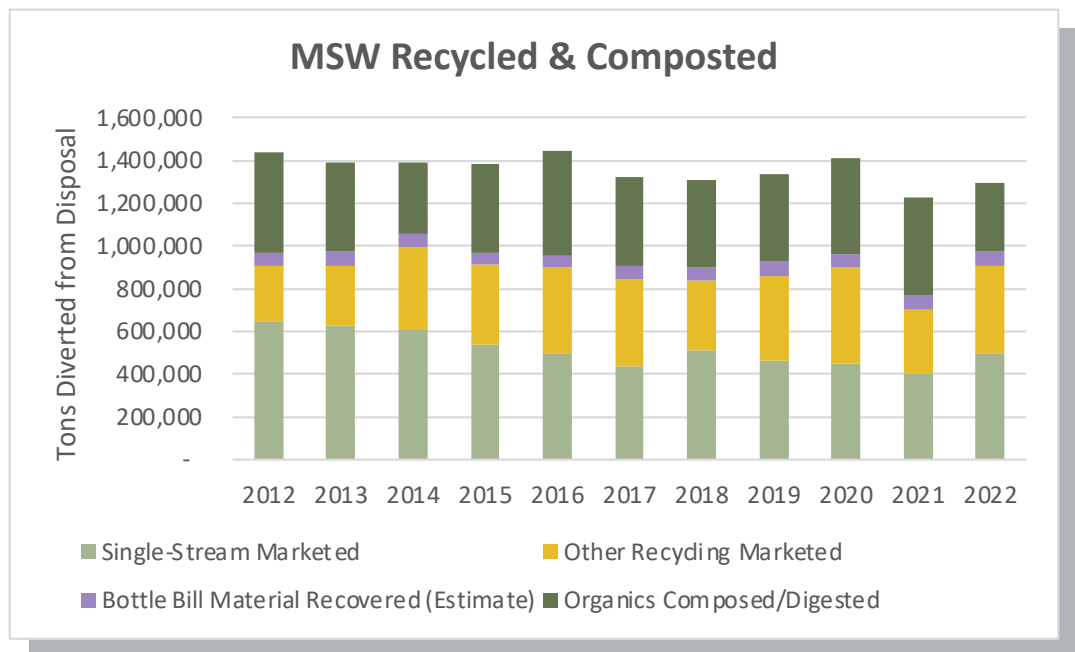
Overall, MSW disposed has been decreasing by an average of 1% annually over the last 10 years. In 2022, MSW disposal decreased 1% from 2021.

FIGURE 4: CT MSW disposed annually with percent change over the previous year.



MSW Diverted From Disposal

FIGURE 5: Distribution of MSW diverted from disposal through recycling and composting.



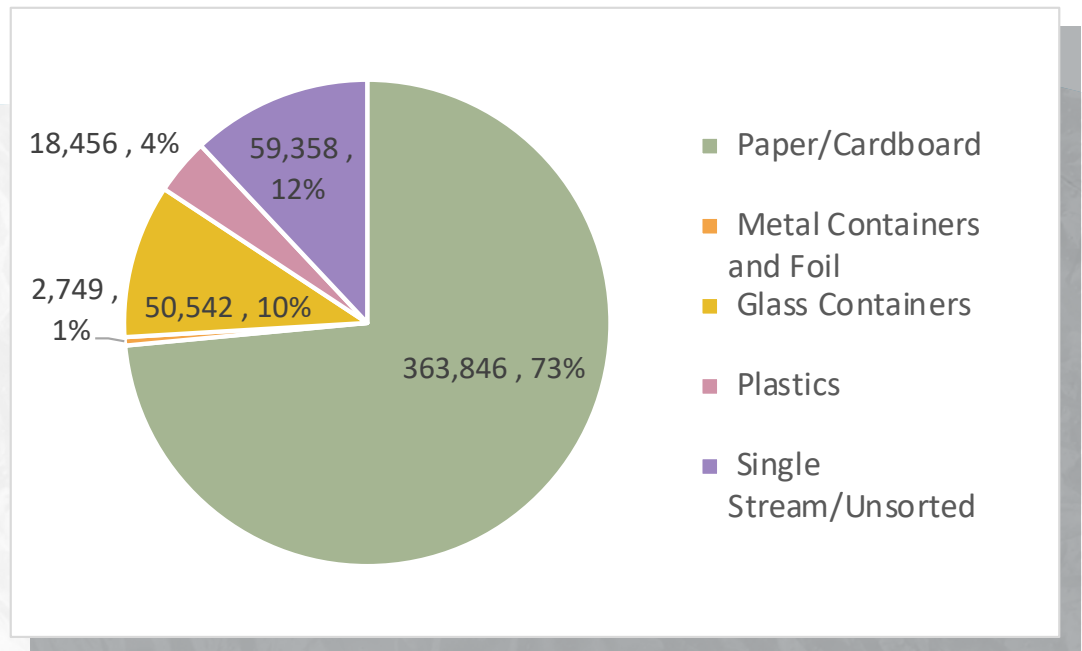
About 1.3 million tons of material were diverted from disposal in 2022. Of that, 38% was single-stream recycling marketed, 32% was additional recycling marketed (materials not currently collected through the single stream system), 25% was material composted or anaerobically digested, and 5% was material collected through the 'bottle bill' container redemption program. 2022 saw a slight rebound from a 10-year low dip in recyclables diverted in 2021, but overall recycling tonnages in CT have remained relatively steady over the last 10 years.

According to the 2015 Waste characterization Study of Connecticut's waste, 17% of waste disposed consists of material that could have been recycled through the single stream (376,404 tons when applied in 2022) and 41% could have been composted (905,995 when applied in 2022). This demonstrates large potential for additional recycling and the availability of feedstock for composting and anaerobic digestion programs.

Single Stream Recycling

CT DEEP measures single stream and additional recycling diverted from disposal by the tonnage marketed from recycling facilities and reported directly from towns. To prevent double-counting, material marketed to in-state permitted/reporting recycling facilities for each category has been removed from these totals. Items that can be recycled through the single-stream recycling system in Connecticut (also referred to as blue-bin recyclables or What's In What's Out [WIWO] materials) include plastic containers, cardboard/boxboard, paper, food and beverage cartons, aluminum foil, metal cans and bottles, and glass bottles and jars.¹³ In 2022, the heaviest share of single stream recycling marketed was paper and cardboard fiber, followed by unsorted single stream recycling and glass.

FIGURE 6: Tons of single-stream recycling materials marketed by CT facilities and reported by towns in 2022.

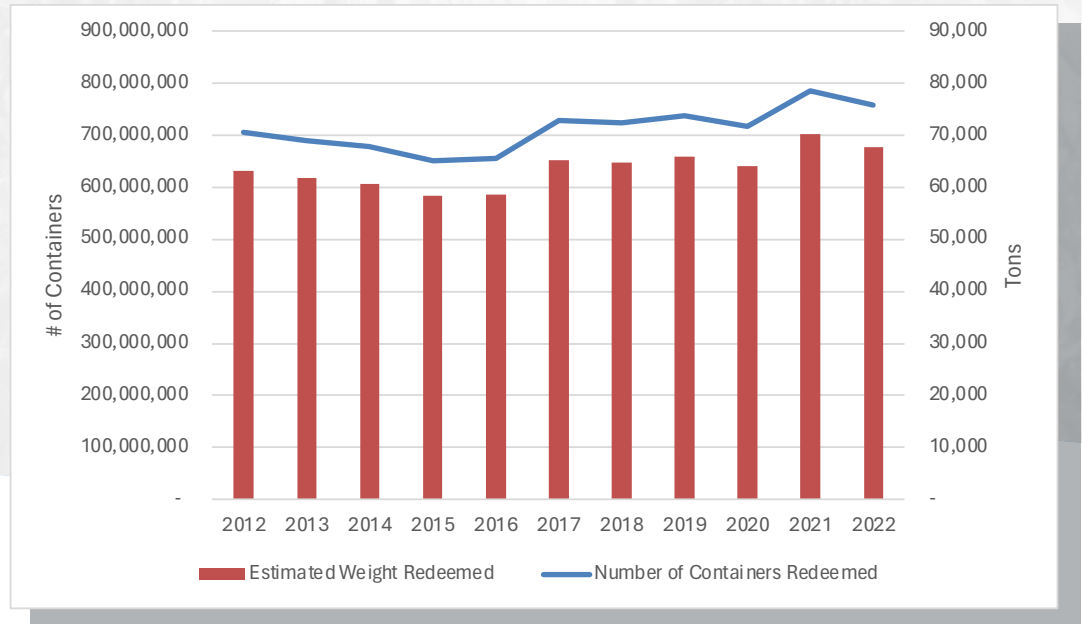


Bottle Bill Redemption System

An estimated 67,832 tons of material were recovered through CT's bottle bill redemption system in 2022, including an estimated 55,711 tons of glass, 4,564 tons of aluminum, and 7,557 tons of plastic. New legislation passed in 2021 expanded covered beverages in 2023 and increased the deposit value to \$0.10 per covered container in 2024, but changes have not affected 2022 data.

¹³ Recycle CT: What's In What's Out Guide <https://www.recyclect.com/en/in-the-bin/>

FIGURE 7: Containers redeemed through the Bottle Bill Redemption program and their estimated total tonnage 2012- 2022.



Additional Recycling & Extended Producer Responsibility Programs

For the purposes of this report, additional recycling includes MSW materials that cannot be recycled through the single stream but can nevertheless be recycled when source-separated through other programs. The data include material reported by Extended Producer Responsibility (EPR) stewardship organizations, permitted CT recycling facilities and towns; they do not include other material recovered through additional reuse/recycling programs. In 2022, CT marketed 408,294 tons of additional recycling.

Materials covered under EPR programs in 2022 include paint, mattresses, electronic devices, and mercury thermostats. Towns and facilities in CT report recycling paint, mattresses, and electronics. However, as those totals are incomplete and/or duplicates, they are replaced with tonnages reported by the materials' respective stewardship organizations for the purposes of this report. In 2022, PaintCare¹⁴ reported 395,943 gallons, or 1,980 tons, of paint collected through the system. The Mattress Recycling Council¹⁵ reported 198,766 mattresses collected and 3,808 tons of mattress material recycled in 2022. The statewide electronics recycling program reported 3,668 tons of covered electronic devices and 1,277 tons of additional non-covered electronic devices recycled in 2022. The Thermostat Recycling Corporation reported recovering 2,360 mercury thermostats and recycling 16.8 pounds of mercury in 2022. The focus of the thermostat program is to remove lightweight thermostats containing mercury from the waste stream and does not represent a significant tonnage of material diverted from disposal.

¹⁴ Connecticut Paint Stewardship Program 2022 Annual Report

¹⁵ <https://mattressrecyclingcouncil.org/>

TABLE 2: Materials marketed outside of the single-stream or bottle bill infrastructure, including EPR materials.

Additional Recyclable Material	Tons Additional Recycling Marketed in 2022
Ballasts	72
Batteries	632
Electronics*	4,945
Plastic Film	285
Bulbs	162
Mattresses*	3,808
Waste Oil/Filters	1,789
Paint*	1,980
Propane Tanks	14
Tires**	38,393
Textiles & Used Goods	13,989
Mercury & Thermostats	2
Wood (Recycled)	342,121
Other	227

*EPR items; data is sourced from stewardship organizations (paint and mattresses) or participating recyclers (electronics).

**Tires are considered a special waste (typically not considered MSW). Tires reported as marketed for recycling are included in the additional recycling MSW category here. Tires disposed or used as fuel are counted as Non-MSW disposed.



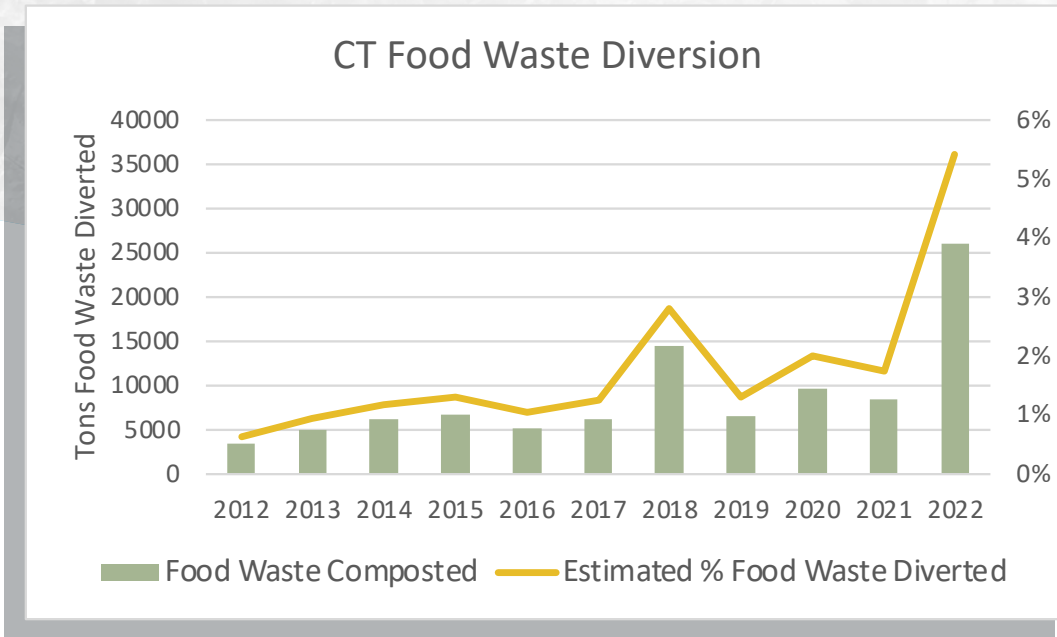


FIGURE 8: Tonnage of food waste composted, and the portion of all CT food waste generated that was diverted from disposal through composting at reporting facilities.

MSW Composted includes food waste, grass, leaves, and yard waste likely to be composted municipally or at recycling, composting, or anaerobic digestion facilities. In 2022, CT sent 325,727 tons of organic waste to be composted. Food waste accounts for a small but rising percentage of compostable MSW diverted from disposal, likely due to the expansion of the Commercial Organics Law, food waste diversion pilot programs, and expansion of statewide capacity. In 2022, over 26,000 tons of food waste were diverted to composting, animal feed operations or anaerobic digestion facilities, a 200% increase over 2021. However, an estimated additional 455,000 tons of food waste remains in the MSW stream destined for disposal, meaning that only about 5% of food waste in the MSW stream is currently being diverted.

Recycling Residuals

In 2022, 127,930 tons of material were disposed of by CT recycling facilities as residuals. This accounted for 12% of the material reported received by facilities in 2022 (referred to as the residuals rate). The residuals rate indicates the proportion of material that failed to make it through the recycling system to market. A low residuals rate represents a higher quality of recycling infrastructure, improvements in detection technology, and a higher level of public recycling knowledge. The 2022 residuals rate has decreased from a ten-year high of 19% in 2020, potentially due to recent infrastructure investments at MRFs or a return to normal levels of waste generation post-pandemic.

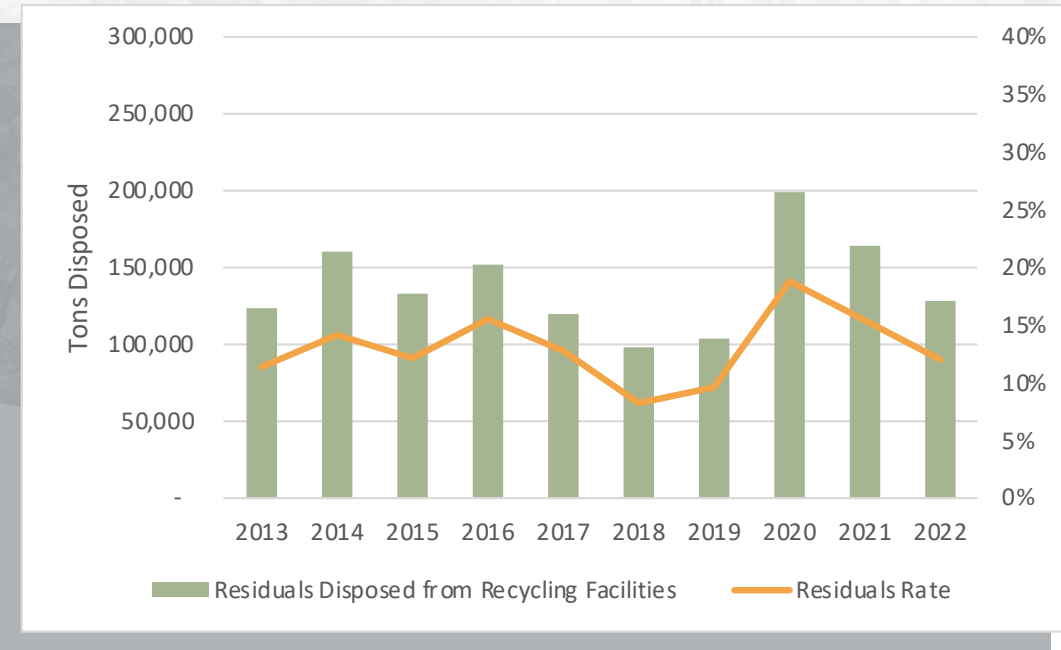


FIGURE 9: Residuals disposed by recycling facilities 2013-2022.



MSW Overall Outlook & Progress Towards Diversion Goals

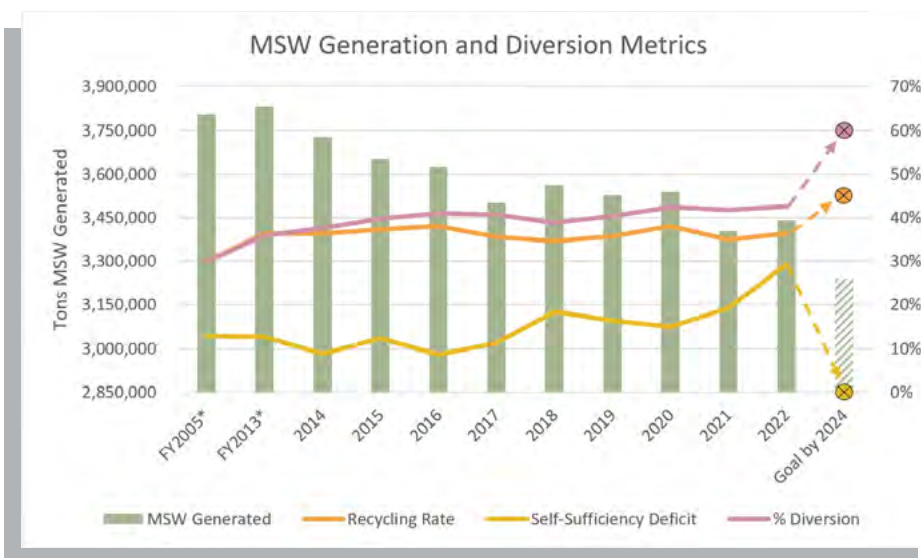
In July of 2022, MIRA ceased operations at its Hartford RRF, which processed ~500k-700k tons per year of MSW. Therefore, 2022 numbers only reflect a partial year of Connecticut’s new reality; DEEP projects that 40% (about 880,000 tons) of CT MSW will be shipped out of state annually going forward. This is shown in Table 3 below as the ‘self-sufficiency deficit.’ The Q3 and Q4 data (following the MIRA closure) are consistent with this projection, indicating that virtually all tonnage previously managed at the MIRA Hartford RRF is now being exported. DEEP estimates that the additional tonnage exported due to the MIRA closure will increase overall greenhouse gas emissions associated with transporting and landfilling waste by about 150,000 metric tons CO2 equivalent annually.¹⁶



¹⁶ Calculated using EPA’s WARM Model.

TABLE 3: Summary of municipal solid waste actual aggregate totals and projections of municipal solid waste totals with a full year of the Hartford MIRA RRF closed.

	2022 Actual Tons	Tons Projected for Full Year with MIRA RRF closure
CT MSW Disposed at In-State RRF	1,548,196	1,306,396
CT MSW Total Disposed Out-of-State	640,199	881,998
<i>CT MSW to Out-of-State Landfill</i>	571,142	784,979
<i>CT MSW to Out-of-State RRF</i>	69,057	97,020
CT MSW Disposed (total)	2,188,395	2,188,395
CT MSW Recycled (total)	971,455	971,455
<i>CT MSW Single-Stream Recycled</i>	495,329	495,329
<i>CT MSW Recovered through the bottle bill (estimate)</i>	67,832	67,832
<i>Other CT MSW Recycled</i>	408,294	408,294
CT MSW Waste Composted/AD (total)	325,727	325,727
<i>CT MSW processed at AD</i>	20,999	20,999
<i>Other CT MSW Composted</i>	304,728	304,728
CT MSW Recycled & Composted	1,297,182	1,297,182
CT MSW Generated	3,485,577	3,485,577
Per Capita MSW Disposed ¹⁷	3.31 lbs/person/day	3.31 lbs/person/day
CT's MSW Recycling Rate (% of MSW generated that was diverted from disposal via recycling and composting)	37.2%	37.2%
Self-Sufficiency Deficit (% of MSW disposed that is exported)	29.3%	40.3%



Overall, CT generated about 3.5 million tons of MSW (including MSW material disposed and diverted for recycling/composting) in 2022. About 1.3 million tons (or 37% of MSW generated) were diverted through recycling or composting. The following describes CT's progress towards the goals outlined in the 2016 CMMS to reach 60% diversion of the 2005 baseline of 3.8 million tons of MSW generated.

FIGURE 10: MSW generation tonnage, recycling rate (tons diverted/tons generated), self-sufficiency deficit (amount of waste disposed that is exported out of state), and % diversion from the 2005 baseline.

¹⁷ Assuming a population of 3,626,205 persons, via United States Census Bureau QuickFacts Connecticut

$$\% \text{ Diversion} = \frac{(2005 \text{ MSW Generation} - 2022 \text{ MSW Generation}) + 2022 \text{ MSW Recycled \& Composted}}{2005 \text{ MSW Generation}} \times 100$$

FIGURE 11: Equation to calculate diversion goal progress based on the FY2005 baseline generation.

Since FY2005 and FY2013,¹⁸ CT has made slight progress on reducing MSW generated, reducing MSW disposed, and increasing diversion to recycling and composting. About 20,000 tons were diverted to waste conversion in 2022 via anaerobic digestion. However, based on 2022 data, Connecticut is not in line to meet its statutory goal of 60% diversion by 2024 without immediate and significant changes to the waste system.

TABLE 4: Progress towards 60% diversion by 2016 CMMS reduction strategy.

Annual Goal (2016 CMMS)	2022 Actual Progress	Additional Annual Progress Needed by 2024
A reduction in annual MSW generation by 360,000 tons (10 percent of 3.6 million tons)	A reduction in MSW generation by 114,423 tons (3% reduction from 3.6 million tons)	An additional annual reduction of 252,841 tons from generation
The reuse, recycling, and composting of 1.46 million tons of materials (45% of remaining 3.24 million tons)	The reuse, recycling, and composting of 1.297 million tons of materials (37% of MSW generated)	Additional diversion of 155,554 tons of material through reuse, recycling, and composting
The use of newly developed waste conversion processes, including anaerobic digestion, to manage at least 300,000 tons that would otherwise be disposed via traditional waste-to-energy or landfill	The use of anaerobic digestion to process 20,999 tons of material. There are no other waste conversion technologies currently used in CT.	Addition diversion of 279,001 tons of material to waste conversion technologies
1.48 million tons of MSW remain to be disposed via traditional waste-to-energy or landfill	2.19 million tons remain to be disposed via traditional waste-to-energy or landfill	An additional reduction and/or diversion of 708,395 tons of MSW
60% diversion of waste from 2005 baseline	42% diversion of waste from 2005 baseline	Additional 18% diversion from 2005 baseline

¹⁸ FY2005 and FY2013 data used in this section is sourced from previously published reports including the 2006 Solid Waste Management Plan and Estimates of Connecticut Municipal Solid Waste (MSW) Generated, Disposed, and Recycled FY2013. Methodologies for tabulating recycling totals may vary from those used to tabulate calendar year totals used in the rest of this report.

Non-MSW By the Numbers

Bulky/Oversized, Landclearing & Special Waste Disposal

In 2022, CT disposed of 1,381,245 tons of non-MSW wastes, including bulky, oversize waste, land clearing debris, construction & demolition waste, and special waste. Due to variable reporting, bulky, oversized, landclearing, and C&D waste are all included in the ‘bulky’ category for the purposes of this report. In 2022, CT produced the lowest tonnage of non-MSW waste disposed since 2014.

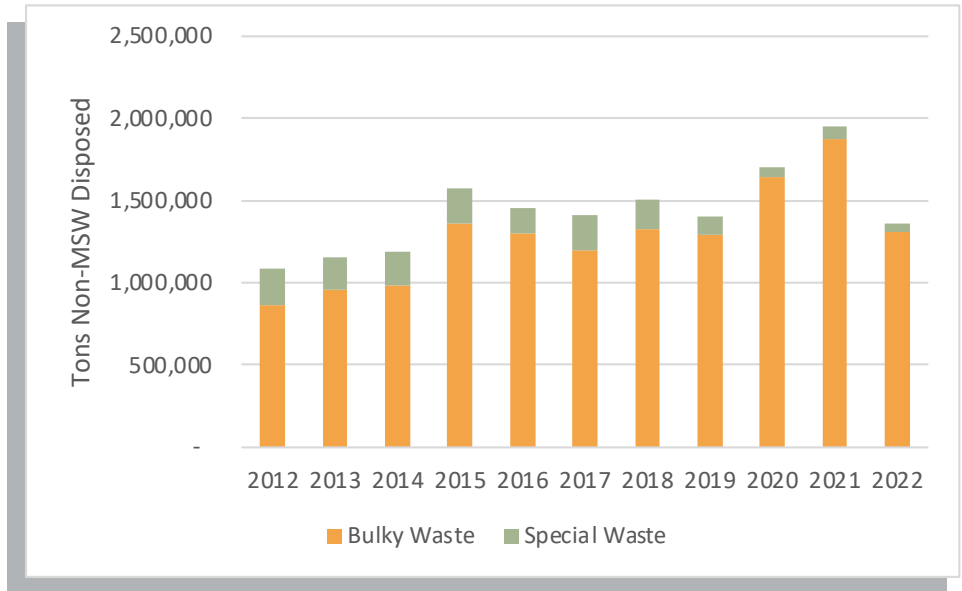
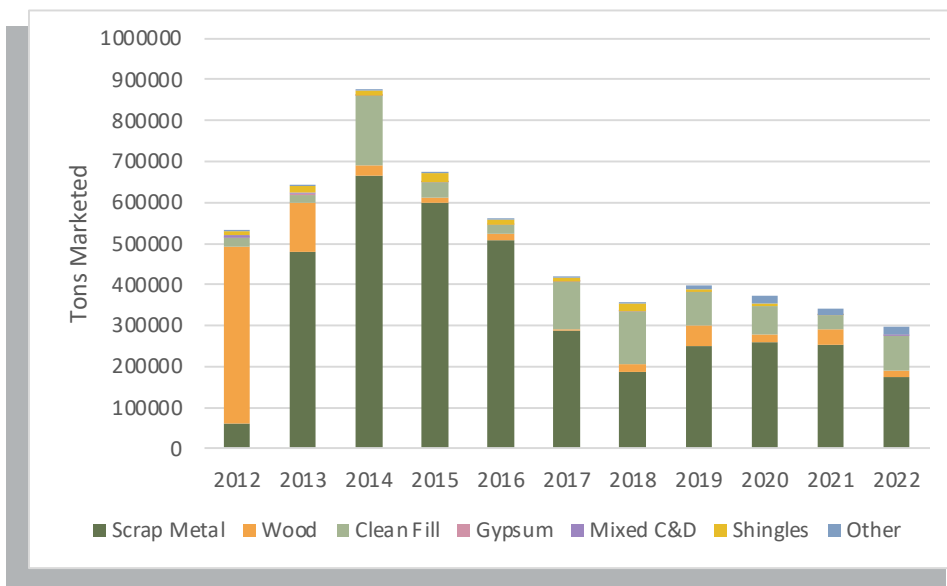


FIGURE 12: Tons of Non-MSW disposed 2012-2022.

Non-Msw Recycled/Composted

In 2022, CT marketed 123,715 tons of non-MSW materials including clean fill, landclearing/construction wood, gypsum, and mixed C&D. Additionally, CT marketed 174,906 tons of scrap metal, including metal recovered from RRF facilities. Overall, non-MSW tonnage marketed has been falling slightly annually since 2019 and reached a 10-year low in 2022. Demolition/debris wood was uncharacteristically high in 2012 and 2013 and is likely due to clean-up efforts after Hurricane Sandy. Scrap metal facilities were required to report data to CT DEEP in lieu of a solid waste permit starting in 2013.¹⁹



DEEP has not received additional data or information to reconcile the larger volumes of scrap metal marketed from 2013-2016 compared to 2017 and later.

FIGURE 13: Tons of Non-MSW Marketed from 2012-2022

¹⁹ CGS Sec. 22a-208f: Chapter 446d-Solid Waste Management (ct.gov)

Appendix A: Data Qualifiers And Limitations for Annual Solid Waste Reports

General

Data is aggregated primarily from information provided on quarterly reports submitted to CT DEEP by Connecticut permitted solid waste facilities including resource recovery facilities (waste-to-energy facilities), landfills, solid waste transfer stations, recycling facilities, volume reduction facilities. This data is supplemented by scrap metal facilities (who are required to report but may not be permitted) and the Annual Municipal Recycling Report (AMRR) provided by municipalities. The reports contain tonnages of materials (with material type information) received, marketed, and disposed, along with source and destination facilities when applicable. These data elements are the minimum requirement under CGS [Sec. 22a-209\(f\)](#). Reports may be missing, inaccurate, or contain typographic errors. Facility-reported item types may not necessarily align with statutory or permitted definitions, or the definitions used in this report. All tonnages reported in this report are short tons (2000 pounds) and have most frequently been rounded to the nearest 100th ton. The 2022 Disposal & Diversion Report uses aggregate weights that have been filtered to minimize double-counting. Any reports submitted after October 31st, 2023 are not included in this data report.

MSW Disposal Data Qualifiers

- Data regarding MSW hauled directly out-of-state for disposal is required to be reported to municipalities and to CT DEEP by collectors hauling such MSW. However, compliance with that reporting requirement is variable. Therefore, there may be additional tonnages of MSW disposed that are not included in the CT MSW statistics.
- MSW is often reported as ‘mixed,’ preventing an accurate estimate of either residential or commercial tonnages. Therefore, MSW disposal figures represent the combined total of residential and non-residential disposal.

Recycling/Composting Data Qualifiers

- For the purposes of this report, recycling data is based on materials reported marketed on quarterly reports submitted to the CT DEEP by CT solid waste facilities permitted to process source separated recyclable items and CT regional solid waste transfer stations permitted to transfer recyclables, and the annual municipal recycling reports (AMRRs) submitted to the CT DEEP. The source of marketed material cannot be tracked through the recycling system, and therefore some tonnage marketed may have originated out of state. Composting data is based on materials reported received on such reports, and includes only material of Connecticut origin.
- The tonnage of leaves or other yard waste recorded as being recycled at municipal sites is usually estimated in cubic yards. The reliability of the conversion factor may be affected by the moisture content of the leaves and other material.

- Estimated tonnages of glass, metal, and plastic beverage containers recycled through the Connecticut bottle deposit law infrastructure are based on applying percentages from a 2013 characterization study to 2022 escheat numbers and should be considered approximations only.
- The following recycling tonnages are not included in the data presented above with the exception of tonnages included in the annual municipal recycling reports (AMRRs):
 - Waste oil recycled by businesses or garages
 - Material backhauled by retail chains to out-of-state distribution centers for recycling or other recyclable material which does not pass through a permitted CT solid waste facility or municipality
 - Food scraps accepted at farms/anaerobic digesters that accept less than 40% of their feedstock from off site
 - Home food scrap, leaf, and yard waste composting
 - Textiles and home goods reused or recycled through charitable organizations
- Material used as alternative daily landfill cover material is not knowingly included in the recycling statistics.
- Material (other than waste oil) burned for energy is not considered recycled

Annual Municipal Recycling Report Participation

Pursuant to CGS Sec.22a-220(h), on or before September 30th, each municipality must submit an annual report to the DEEP that includes disposal & recycling tonnages sent to locations other than permitted CT solid waste facilities. In 2022, 105 of the 169 CT municipalities (62%) submitted the Annual Municipal Recycling Report (AMRR). The data in the 2022 Disposal & Diversion Report does not include tonnages disposed or recycled from the 62 non-reporting towns that did not pass through a reporting CT facility. For simplicity, FY2022 data contained in town reports was included in this CY2022 data report. Appendix B lists town participation in the AMRR for 2022.

Recycling Facility Double-Counting

Marketed materials are reported together with materials transferred to another in-state recycling or reuse facility. This results in materials transferred from one CT recycling facility to another being mixed in with tonnages sent to an end market or broker. DEEP attempts to minimize this double-counting by removing most recyclable MSW material reported by in-state facilities that was marketed to another in-state reporting facility of the same material category from the aggregate recycling tonnages.

Non-MSW Data Qualifiers

- The Report does not include any road or bridge C&D waste.
- The Report does not include any C&D waste sent to reuse (e.g. building material exchanges), C&D waste used on-site, or C&D waste that goes directly out-of-state or directly to an end user from a C&D site.
- CT facilities that only process clean fill e.g. asphalt, brick, and concrete are not permitted by DEEP and do not submit reports to DEEP regarding tonnages of ABC processed and reused.

Appendix B: Annual Municipal Recycling Report Participation

Town Name	Submitted 2022 AMRR (By October 2023)	Additional Missing AMRRs (2000-2021)
Andover	No	2021, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2005
Ansonia	No	2021, 2019, 2018, 2016, 2015, 2014, 2013, 2012
Ashford	No	2021, 2019, 2016, 2006
Avon	Yes	2019
Barkhamsted/New Hartford/Win	Yes	
Beacon Falls	Yes	2016
Berlin	No	2021, 2018
Bethany	Yes	
Bethel	Yes	
Bethlehem	No	
Bloomfield	Yes	
Bolton	Yes	
Bozrah	No	2021, 2018, 2016, 2015, 2014, 2013, 2011
Branford	Yes	
Bridgeport	No	2021, 2019, 2015, 2014, 2012, 2011
Bridgewater	Yes	Did not include tonnages in 2022, 2021, 2018
Bristol	Yes	
Brookfield	Yes	
Brooklyn	Yes	
Burlington	Yes	2021
Canaan	Yes	
Canterbury	No	2021
Canton	Yes	
Chaplin	No	2021, 2016, 2012
Cheshire	Yes	
Chester	No	2021
Clinton	Yes	
Colchester	No	2021, 2019, 2018, 2016, 2015, 2014, 2013
Colebrook	Yes	2018

Town Name	Submitted 2022 AMRR (By October 2023)	Additional Missing AMRRs (2000-2021)
Columbia	Yes	
Cornwall	Yes	
Coventry	Yes	
Cromwell	No	2021
Danbury	No	2021
Darien	Yes	
Deep River	Yes	2021, 2019, 2018, 2016
Derby	No	2021, 2019, 2018, 2016, 2015, 2014, 2013, 2012
Durham/Middlefield	Yes	
East Granby	No	2021
East Haddam	Yes	
East Hampton	Yes	
East Hartford	Yes	
East Haven	No	2021, 2019, 2018, 2016, 2013
East Lyme	No	2021, 2019, 2018
East Windsor	Yes	
Eastford	Yes	2016, 2015
Easton	Yes	2019,
Ellington	Yes	2015
Enfield	Yes	
Essex	Yes	2021, 2018
Fairfield	Yes	
Farmington	Yes	
Franklin	No	2021
Glastonbury	No	2021, 2019, 2018, 2016, 2015, 2014
Goshen	No	
Granby	Yes	
Greenwich	Yes	
Griswold	Yes	2019, 2018
Groton	Yes	2020, 2021
Guilford/Madison	Yes	
Haddam	No	2016
Hamden	No	2021, 2019, 2018, 2016
Hampton/Scotland	Yes	2014, 2013, 2012, 2011

Town Name	Submitted 2022 AMRR (By October 2023)	Additional Missing AMRRs (2000-2021)
Hartford	No	2021, 2018, 2011
Hartland	Yes	
Harwinton	Yes	
Hebron	Yes	
Kent	Yes	
Killingly	Yes	
Killingworth	No	2021, 019, 2018
Lebanon	Yes	
Ledyard	Yes	
Lisbon	Yes	
Litchfield	Yes	2016
Lyme	No	2021
Manchester	No	2021, 2019
Mansfield	Yes	
Marlborough	No	
Meriden	No	
Middlebury	No	
Middletown	Yes	
Milford	No	2021, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2002
Monroe	Yes	2021
Montville	Yes	2019, 2016, 2015, 2014
Morris	Yes	2016, 2009, 2005
Naugatuck	No	2021, 2019, 2018, 2016, 2015
New Britain	No	2021
New Canaan	No	2021
New Fairfield	No	2021
New Haven	Yes	2021
New London	No	2021, 2019, 2018
New Milford	Yes	2021
Newington	Yes	
Newton	Yes	
Norfolk	Yes	2019
North Branford	No	2021, 2019

Town Name	Submitted 2022 AMRR (By October 2023)	Additional Missing AMRRs (2000-2021)
North Canaan	No	2021, 2019, 2016, 2014
North Haven	Yes	2021
North Stonington	Yes	
Norwalk	Yes	
Norwich	No	2021, 2019, 2018
Old Lyme	No	2021
Old Saybrook	Yes	2021
Orange	Yes	
Oxford	No	2021
Plainfield	Yes	
Plainville	Yes	2021
Plymouth	Yes	2021, 2019
Pomfret	Yes	
Portland	Yes	
Preston	Yes	
Prospect	No	2021
Putnam	Yes	2018, 2015
Redding	Yes	
Ridgefield	Yes	
Rocky Hill	No	2021, 2019, 2018
Roxbury	No	2021
Salem	No	2021, 2019, 2018, 2016, 2015, 2014, 2012
Salisbury/Sharon	No	2021
Seymour	Yes	2019, 2018, 2016, 2014, 2011, 2008, 2007, 2006, 2005, 2002
Shelton	Yes	2019, 2016
Sherman	No	2021
Simsbury	No	2019, 2018
Somers	Yes	
South Windsor	No	
Southbury	No	2021, 2019, 2018
Southington	No	2021, 2018, 2016, 2015, 2014, 2013
Sprague	Yes	
Stafford	Yes	

Town Name	Submitted 2022 AMRR (By October 2023)	Additional Missing AMRRs (2000-2021)
Stamford	No	2021, 2018
Sterling/Voluntown	No	2022, 2018
Stonington	Yes	
Stratford	Yes	
Suffield	Yes	
Thomaston	Yes	
Thompson	Yes	
Tolland	No	2022, 2019, 2018
Torrington	No	2022
Trumbull	Yes	
Union	Yes	
Vernon	Yes	
Wallingford	Yes	
Warren	No	2021
Washington	Yes	2021
Waterbury	Yes	
Waterford	Yes	
Watertown	Yes	
West Hartford	Yes	
West Haven	No	2021, 2019, 2018, 2017, 2015, 2014, 2013
Westbrook	Yes	
Weston	No	2021
Westport	Yes	
Wethersfield	Yes	
Willington	Yes	
Wilton	Yes	
Windham	Yes	
Windsor	No	2021, 2019, 2018, 2015
Windsor Locks	Yes	2021, 2018
Wolcott	No	2021, 2019, 2018, 2016, 2015, 2014, 2013, 2012
Woodbridge	No	
Woodbury	Yes	
Woodstock	Yes	



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