

RecyclingWorks in Massachusetts

Year End Report: Fiscal Year 2023 (July 2022 – June 2023)

The Center for EcoTechnology (CET) is proud to submit the FY23 year-end report for RecyclingWorks in Massachusetts (RecyclingWorks) to the Massachusetts Department of Environmental Protection (MassDEP). CET and MassDEP continued to provide waste diversion assistance to the commercial and institutional sectors through a robust suite of services. The following represents approximated measurable impacts this fiscal year:

- Approximately 1,430 tons of material diverted from disposal, contributing to an overall cumulative direct program impact of nearly 324,000 tons of material diverted since 2013
- 533 units of fluorescent lamps recycled
- 1,784 total phone and email hotline inquiries
- In-person or virtual technical assistance (TA) provided to 232 businesses
- Compost site TAs provided to 4 operations
- Over 110,600 visits to www.recyclingworksma.com
- 16 speaking engagements/events, reaching 1,117 attendees

Key objectives identified for FY23 included spreading information and guidance surrounding the November 1, 2022 waste ban changes. Additionally, a focus was placed on advancing principles and initiatives of Diversity, Equity, and Inclusion (DEI), with a particular emphasis on engaging businesses in Environmental Justice (EJ) communities and minority owned businesses in Massachusetts. Here are a few highlights of CET's activities that support these priority areas:

New Waste Ban Materials – Textiles & Mattresses

- Hosted the RecyclingWorks Fall 2022 Virtual Forum in November 2022 with speakers highlighting successful implementation of textile and mattress recycling initiatives.
- Adapted an existing flyer about the commercial food waste disposal ban to include information about textiles and mattresses, available in both [English](#) and [Spanish](#).
- Delivered a presentation about textiles diversion and technical assistance services during an hour-long session at the Annual Northeast Laundry Association (NELA) Conference, in Framingham.
- Developed a [written case study](#) featuring Ecos Properties and Worleybeds, two businesses with textile and mattress recycling programs.
- Added updated waste disposal ban information and best practices for recovering textiles and mattresses to the Property Manager sector webpage.

Commercial Food Waste Diversion

- Completed a [written and video case study](#), initiated in FY22, featuring Johnny's Luncheonette, a medium-sized restaurant in Newton which now diverts 600-700 pounds of food material per week for composting.
- Delivered a presentation that focused on resources and services to support compliance with the MassDEP organics disposal waste ban.

- Developed a restaurant-specific one-page summary of the commercial food waste disposal ban changes, options for diversion, and links to program resources for the Massachusetts Restaurant Association to share with its members. This summary is available in both [English](#) and [Spanish](#), and was also adapted for food rescue organizations.

Translation & Interpretation for Language Access

- Promoted translation services, including readily available waste bin signage, through the newsletter, website, and social media channels.
- Implemented a Spanish-language greeting for the phone hotline, that allows callers to indicate whether they need service in Spanish.
- Added a translation plug-in to the RecyclingWorks website that enables users to easily translate the full site into Spanish.
- Translated the existing program flyer/rack card into five languages, with printed copies in Spanish and Portuguese.
- Developed a set of dual English/Portuguese waste container signs and uploaded to the [Get Help webpage](#) with English and Spanish versions
- Translated two existing training graphics on flattening cardboard and reducing plastic bag contamination in the recycling stream into five languages and added to [Cardboard](#) and [Single Stream](#) materials webpages.

Serving Environmental Justice Populations

- Targeted outreach to industry associations and organizations that serve minority-owned businesses such as the Black Economic Council of Massachusetts, BlackBoston.com, and the Latin American Business Organization (LABO), urging them to spread the word about RecyclingWorks program assistance and MassDEP waste disposal ban changes to their networks.
- Invited to deliver a presentation for the Greater Haverhill Chamber of Commerce about waste ban changes, technical assistance, mercury recovery, and other program resources to businesses in the Haverhill area.
- Hosted an exhibitor table at the Latin American Business Expo in Worcester to engage the local Latin and minority business community and share information about technical assistance.
- Targeted outreach conducted in Worcester, with Spanish-language marketing postcards sent to 26 Latin restaurants to promote technical assistance. Follow-up visits were conducted in-person with a Spanish interpreter.

Waste Reduction & Reuse

- Collaborated with MassDEP and other stakeholders to launch the new Deconstruction Workgroup, with an inaugural meeting in September 2023, which serves as an extension of the MassDEP Reduce & Reuse Working Group.
- Shared examples of businesses and institutions successfully reducing the disposal of single-use items in food service, including a [blog post](#) about Mount Holyoke College's partnership with USEFULL.

- In partnership with MassDEP and the Massachusetts Department of Public Health (DPH), CET initiated the development of best management practices to help restaurants, colleges, and universities switch from single use to reusable food ware systems.

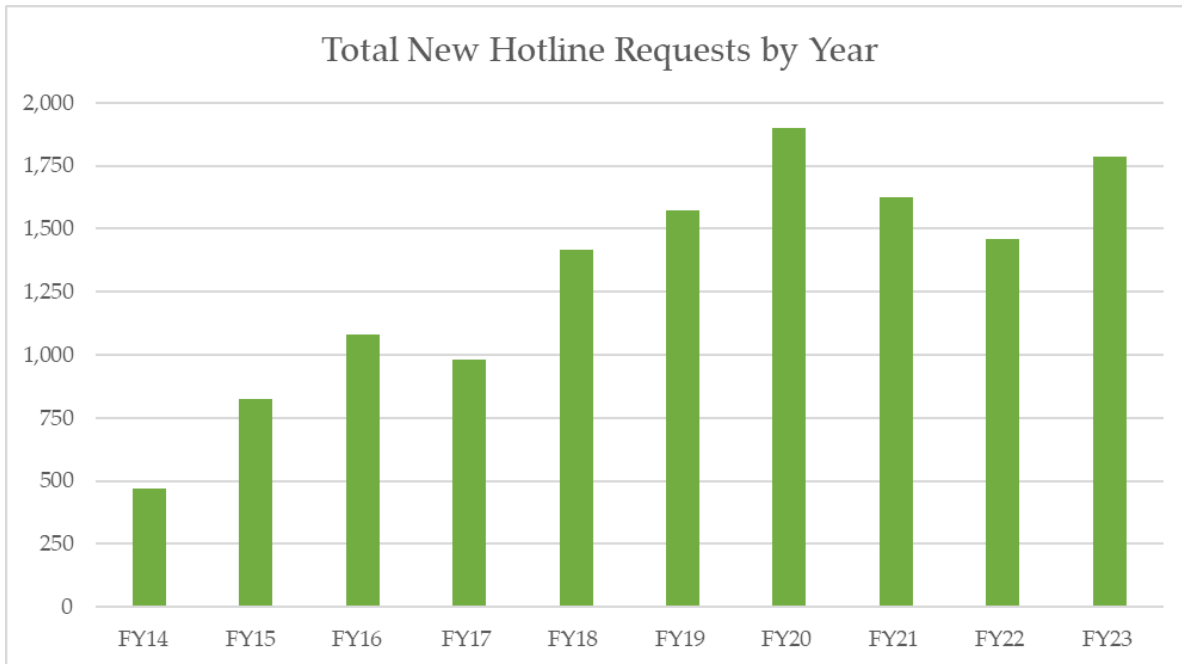
Email/Phone Hotline

CET staff operate the RecyclingWorks hotline phone and email service. People reaching out to RecyclingWorks are directed to resources on the website, referred to CET field staff for follow up, or processed for continued levels of assistance. In FY21, CET began the use of a third-party interpreter service, which enables RecyclingWorks hotline staff to assist non-English speakers as needed. Additionally, CET recorded and implemented a Spanish-language greeting for the hotline that allows callers to indicate whether they need service in Spanish.

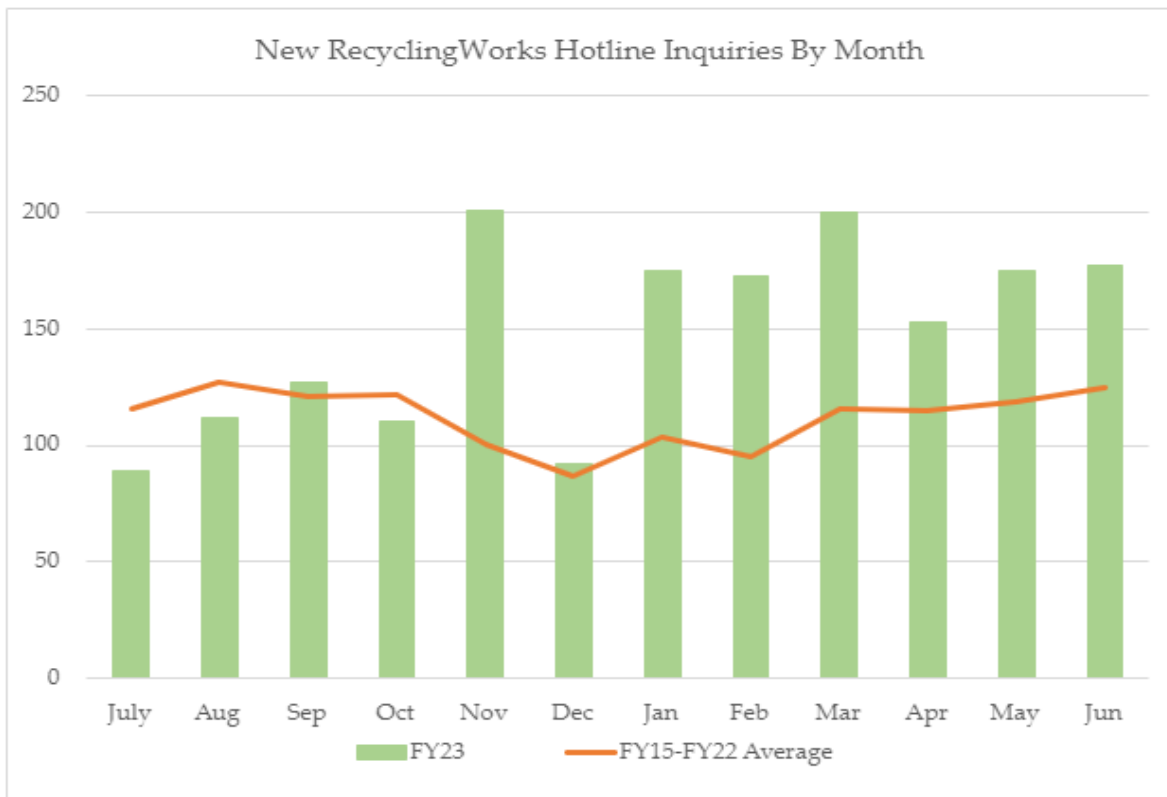
During FY23, CET staff handled 1,784 phone and email RecyclingWorks hotline inquiries, exceeding the number of inquiries handled in FY22 (1,458).

Summary Hotline Statistics, Fiscal Years 2014-2023

	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
New Requests from Businesses & Institutions	418	735	988	870	1,371	1,580	1,853	1,574	1,386	1,695
New Requests from Processors & Haulers	50	92	92	112	46	51	48	52	47	89
Total New Requests	468	827	1,080	982	1,417	1,571	1,901	1,626	1,458	1,784
Total Requests Completed	422	842	1,061	960	1,362	1,631	1,903	1,593	1,392	1,511



During FY23, hotline volume started off relatively low between July 2022 and October 2022, with a notable spike in activity during November 2022, when MassDEP waste ban changes went into effect. After a temporary decrease in activity during December 2022, the hotline volume was steady during the remainder of the fiscal year, fielding between 150-200 inquiries per month.



Businesses continue to express great appreciation for this free hotline service. As in past years, the CET staff fielded inquiries on a broad array of topics. Here are a few common themes observed during FY23:

- **MassDEP Waste Ban Amendments** – We fielded a high volume of questions related to the changes to the MassDEP waste disposal bans in November 2022. These questions came from commercial and institutional waste generators, service providers, municipalities, community and business groups, and residents.
- **Textiles and Mattresses** – We received many questions from both residents and businesses looking for reuse and recycling outlets for textiles and mattresses in response to the waste ban changes. The hotline received a particularly high volume of mattress inquiries from Boston property managers and residents referred to RecyclingWorks by Boston 311. Additionally, textile and mattress reuse and recycling outlets contacted the hotline to request listing in the Find-A-Recycler database.
- **Deconstruction** – Many businesses in the construction and remodeling industry have expressed interest in deconstruction and the reuse of building materials.
- **Furniture and Equipment Reuse** – We fielded questions from businesses and institutions, such as colleges and universities, as well as residents, seeking reuse outlets for surplus materials such as furniture, electronics, building materials, and medical equipment.
- **K-12 Schools & Universities Restarting Food Waste Programs Stalled During the Pandemic** – The impacts of the COVID-19 pandemic on recycling and food waste diversion programs in K-12 schools and colleges continued into FY23 and were reflected in the inquiries we received. Many schools' programs were temporarily stalled due to supply chain issues, staffing turnover, and efforts to minimize contact with shared materials and slow the spread of the virus. Schools that contacted RecyclingWorks and/or were referred through the Green Team program, were also interested in reducing waste from single-use disposables like cutlery and takeout and packaging materials.
- **Construction & Demolition Materials** – We fielded a variety of questions about recycling and reuse of construction and demolition (C&D) materials, including calls about specific materials such as gypsum, and concrete.
- **Hard-to-Recycle Materials** – In particular, we received questions during FY23 about carpeting, photovoltaic panels, and Styrofoam.
- **Managing Potentially Hazardous Materials** – We continued to field questions from residents regarding outlets for household materials such as paint, electronics, thermostats, fluorescent lamps, and lithium batteries. Most of the paint and fluorescent lamp inquiries originated from western Massachusetts.
- **External Requests for Information** – As in previous years, we regularly received inquiries from media, researchers, students, other state agencies, and regional and national organizations focused on waste diversion. For example, a student journalist at Emerson College is writing a story on food waste and interviewed RecyclingWorks to gain insights.

Tonnage Diversion - Hotline & TA Activity

As shown in the table below, approximately 1,431 tons of material were diverted directly due to combined hotline, Mini TA, and TA activities in FY23, a notable increase compared to the previous year. Out of this total, 51% (727 tons) of the material was recycled, 40% (573 tons) was organics diverted for composting, anaerobic digestion, or animal feed, 4% (57 tons) was surplus food donated, and 4% (64 tons) was reused, and 0.7% (9.3 tons) was reduced (waste prevented). Note that this tonnage reflects only activity that could be directly quantified and confirmed, while the actual impact of the RecyclingWorks program at large is likely much greater.

Waste Diversion as a Result of FY23 Hotline, Mini TA, and TA Activities*

Type of Diversion	Annual Tonnage Diverted	Percentage of Total Diversion
Recycled	727 tons	51%
Reused	64 tons	4%
Reduced	9.3 tons	0.7%
Food Donated	57 tons	4%
Organics Diverted**	573 tons	40%
Total	1,431 tons	100%

*Tonnage diverted includes only activity that could be quantified and confirmed during FY23.

**Organics includes food and non-food organics diversion for composting, animal feed, or anaerobic digestion.

RecyclingWorks Website

In FY23 CET continued to maintain and update the RecyclingWorks website and find-a-recycler database. Website content development and improvement during the year focused on the waste disposal ban changes (food waste, mattresses, and textiles), translation of existing resources into additional languages, and other timely topics. Here is a summary of the website content developed and updated during FY23:

- Published 16 new blog posts on topics such as:
 - [Mattress Recycling Solutions](#)
 - [Returnable Takeout Packaging: A Step Towards Zero Waste](#)
 - [Opportunities for Restaurants to Ditch Disposables](#)
 - [MassDEP Recycling Business Development Grant Recipients](#)
 - Business Spotlights
 - [Blue Q Donates Thousands of Surplus Items to Human Services Organization](#)
 - [Northeast Paving Office Recycling and Food Waste Diversion](#)
 - [Walking the Talk at the MassRecycle 2023 Annual Conference](#)
 - [Williamstown Compost Pilot for Local Businesses](#)
- Updated the [Waste Bans and Compliance Webpage](#) updated to include new one-page flyers with information on the waste ban changes for textiles, mattresses, and food waste effective November 1, 2022 in English and Spanish, as well as the MassDEP and RecyclingWorks

recorded presentations that highlight these waste ban changes and resources for textiles, mattresses, and food waste diversion.

- Adjusted the [Food Waste Estimation Guide](#) calculations and corresponding documents to reflect the lowered organics disposal ban threshold of one-half ton food material per week.
- Revised the [Property Manager](#) sector webpage to include details about managing mattresses and textiles as waste ban materials
- Implemented a translation plug-in on the RecyclingWorks website that enables users to easily translate the full site into Spanish.
- Posted a newly developed set of dual-language English-Portuguese waste container signage and posted on the [Get Help webpage](#), with existing English and Spanish versions.
- Translated training graphics about Collecting Cardboard Boxes for Recycling and Preventing Plastic Bags in the Recycling Stream were into five languages (Spanish, Portuguese, Simplified Chinese, Haitian Creole, and Cape Verdean) and posted to the [Cardboard](#) and [Single Stream](#) materials webpages.
- Improved the [Find-a-Recycler](#) tool to include a "match any location option" to improve visibility for service providers without physical locations that work with businesses statewide.
- Updated the list of [On-Site-Systems for Managing Food Waste](#) with new information provided by three manufacturers.
- Replace outdated information about the US EPA WasteWise and Food Recovery Programs on the former WasteWise Forum webpage and emphasize the focus on [RecyclingWorks Forums](#).
- Updated the [Construction and Demolition Material Guidance](#) webpage to reflect new marketplace information, guidance, and service providers.
- Added information to the [Food Donation Guidance](#) webpage about the federal Food Donation Improvement Act (FDIA) and an updated Harvard Food Law and Policy Clinic fact sheet on federal liability protections for food donation.

Find-a-Recycler Tool

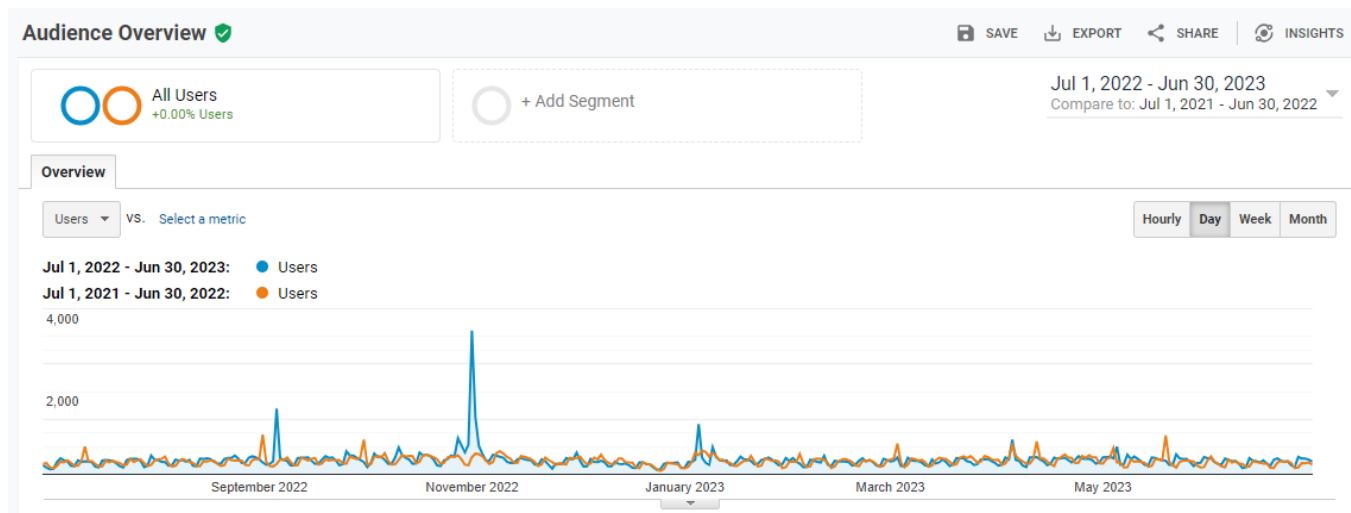
During FY23, CET added or updated 62 listings for haulers or processors in the Find-a-Recycler tool. As a result of the MassDEP waste ban changes, several textile and mattress service providers contacted the hotline to request listing in the Find-A-Recycler database. CET also edited and/or removed existing listings when learning new information through hotline inquiries or otherwise encountering out-of-date information in the database. In preparation for the MassDEP waste disposal ban changes in FY23, CET also reviewed the full list of mattress and textile service providers. As of the end of FY23, there are 436 listings in Find-a-Recycler, a net increase of 14 listings compared to the end of FY22.

Website Statistics

In total, there were 110,655 website visitors and 136,782 sessions in FY23, an increase over FY22. Between FY14 and FY23, the number of visitors, sessions, and page views has increased by 235%, 212%, and 118% respectively. As in previous years, most sessions in FY23 represented new visitors to the website.

Web Traffic Statistics FY14-FY22			
	Visitors	Sessions	Page Views
FY 2014	33,068	43,807	108,203
FY 2015	54,000	65,000	143,000
FY 2016	55,521	69,572	149,315
FY 2017	57,995	73,186	135,528
FY 2018	72,020	88,896	171,470
FY 2019	88,635	110,347	206,013
FY 2020	110,633	134,585	237,213
FY 2021	138,645	149,895	245,435
FY 2022	104,252	127,503	210,606
FY 2023	110,655	136,782	236,382
Percent Change FY2022 – FY2023	6%	7%	12%

RecyclingWorks in MA Website Traffic



Analyzing patterns in website traffic during FY23 reveals that the largest number of users in a single day (3,471 users) visited the website on Tuesday, November 1, 2022, when the new amendments to the MassDEP waste disposal bans went into effect. The second day with the largest number of users was September 6, 2022, when CET sent the September RecyclingWorks newsletter. This newsletter included an overview of the collective impact of food waste prevention technologies in Massachusetts in 2021, as

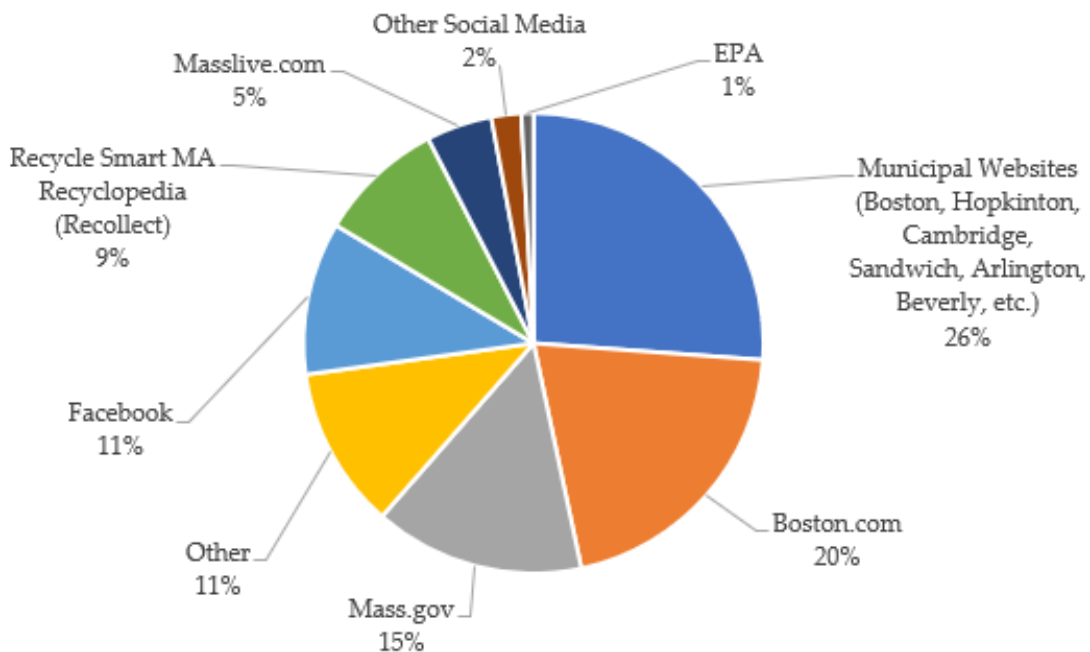
well as a reminder about upcoming Waste Bans. Nearly 250 users clicked on the link in the heading of the newsletter to view the main RecyclingWorks webpage.

Most users visiting the RecyclingWorks website arrive via search engine or direct link, and the remaining website traffic is referred from other websites (12,937 referrals). The graph below highlights some of the top sources of referral traffic.

As in previous years, several municipal websites serve as a significant source of referral traffic to the RecyclingWorks website (26% collectively). The six municipalities listed in the figure above account for more than half of the visitors referred from municipal websites. After municipal websites, the highest percentage of referral traffic came from the news website Boston.com (20%). This is likely the result of an [article published on November 1, 2022](#) about the organics waste disposal ban changes on November, which linked to the RecyclingWorks Food Waste Estimation Guide.

13% of referral traffic was from social media channels including Facebook, Twitter, and LinkedIn. This is notably lower than in FY22, when 28% of referral traffic was driven from Facebook. Consistent with FY22, other notable referral sources include Mass.gov and the MassDEP Recycle Smart MA Recyclopedia tool. Several listings in the Recyclopedia reference the RecyclingWorks program, including those related to construction and demolition materials.

Referral Traffic to the RecyclingWorks Website
(12,937 referrals*)



*Excludes web traffic from search engines, direct searches, and spam referral sites.

Top RecyclingWorks in MA Webpages Visited in FY23

Page	Page Views
Mattresses Material Guidance	6,884
Construction Material Guidance	4,578
Lenox Valley Waste Transfer Facility Database Listing	3,451
Mattresses Search Results Page	3,067
Equipment for Collecting Trash, Recycling, and Food Waste	2,895
Pallets Material Guidance	2,662
Textiles Material Guidance	2,617
Blog Post: Common Causes of and Solutions to Restaurant Food Waste (2018)	2,443
Food Waste Estimation Guide	2,277
Electronics Material Guidance	2,209

RecyclingWorks Newsletters

As outlined in the work plan, CET creates and sends 10 monthly RecyclingWorks newsletters each year, excepting January and July. The email list for this newsletter increased from about 7,454 to 7,516 subscribers in FY23, representing an 0.8% increase in subscribers over the course of the fiscal year.

Some of the topics covered in the [newsletter](#) during FY23 include:

- New case studies featuring [Structure Tone](#) and [Johnny’s Luncheonette](#), as well as spotlights on businesses assisted by RecyclingWorks and/or recognized for their achievements in waste reduction.
- MassDEP waste disposal ban changes for food waste, mattresses, and textiles and resources to help businesses implement new diversion programs for these materials.
- Additional MassDEP announcements, including grant programs and upcoming opportunities for public engagement.
- Highlights of existing resources and services such as RecyclingWorks’ [restaurant](#) and [hospitality](#) sector-specific guidance, guidance on reducing waste at events, best practices for recycling and food waste collection [equipment](#), [food donation guidance](#), office/school [equipment and furniture reuse guidance](#), and the translation and interpretation services available through the RecyclingWorks hotline.
- Upcoming events, including the RecyclingWorks in Massachusetts 2022 Fall Forum and the 2023 Compost Site Operator Practical Skills Workshop, in addition to external events such as the 2023 MassRecycle Conference & Trade Show.

In addition to monthly newsletters, CET sent several E-blasts to the RecyclingWorks email list on specific topics. For example, CET prepared an e-blast promoting registration for the 2022 Fall Forum.

RecyclingWorks Social Media

RecyclingWorks has an active presence on both Facebook, as of FY18, and Twitter, as of FY17.

At the end of FY23, the RecyclingWorks Facebook account had 536 followers, an increase of 4% from FY22. In addition to posting an average of three times per week, CET strategically identified content to boost on Facebook, which effectively creates a paid advertisement with much higher visibility than a basic post. CET boosted posts featuring new case studies, other web resources, select blogs, and upcoming events, specifically targeting relevant audiences such as business owners and facility managers. Boosted posts achieved 11,329 impressions on average. The most-viewed Facebook post in FY23 was one reaching over 9,300 users that shared information about a blog post highlighting returnable takeout packaging at colleges and universities. Other popular posts included an announcement about the 2022 Fall Forum, a post about the March newsletter, and information about a Practical Skills Compost workshop hosted by RecyclingWorks.

CET also regularly promotes events and other RecyclingWorks content through Twitter. In FY23, CET posted three tweets per week on average. The engagement rate decreased from the previous year to an average of four engagements per post. At the end of FY23, the RecyclingWorks Twitter account had 762 followers and a total of 116 clicks on Twitter posts. Starting in June 2021, CET also began creating paid promotions on Twitter. Topics promoted in FY23 included: the Fall 2022 Forum, which gained over 200 impressions with 3 engagements, and a blog on reusable takeout containers, which gained over 70 impressions and received 5 engagements. In FY24, CET will continue to boost and promote content on Facebook and evaluate the value of continued promotion on X (formerly Twitter) as the platform evolves.

Marketing, Outreach, and Education

In FY23, promotional activities included media engagement, developing case studies, speaking engagements and other events, and targeted proactive outreach.

Media Engagement

CET staff were interviewed about the RecyclingWorks program, Massachusetts waste bans, and other waste related topics by the following media outlets for articles:

- BioCycle (October 2022) Johnny's Luncheonette Case Study ([view article](#))
- New England Public Radio (October 2022) Waste Disposal Ban Updates ([view segment](#))
- Emerson College (December 2022) Wasted Food

Additionally, CET staff prepared updates for other organizations to share through their newsletters and social media networks throughout FY23. For example, as requested by MassDEP, CET submitted the following RecyclingWorks updates to be shared in the Northeast Recycling Council (NERC) Monthly Bulletin:

- August 2022 (Food Waste Prevention Marketplace Data)
- September 2022 (Summary of the FY22 Annual Report)
- October 2022 (RecyclingWorks in Massachusetts 2022 Fall Forum Summary)

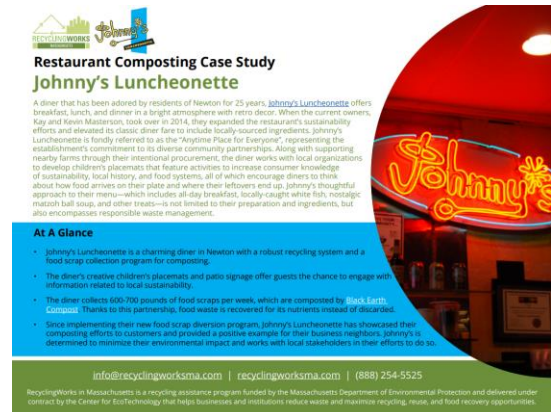
- November 2022 (Summary of two video and written case studies: Johnny's Luncheonette and Structure Tone)
- December 2022 (Summary of MassDEP Waste Ban Materials; Summary of a RecyclingWorks Blog Post on Mt Holyoke College's Reusable Service Ware Program)
- January 2023 (RecyclingWorks' Single Stream and Cardboard Recycling Training for the Hospitality Sector)

Case Studies

In FY23 CET published one video and two written spotlights highlighting a total of four businesses with diversion programs for food waste, textiles, and mattresses.

The first case study featuring a restaurant in Newton, [Johnny's Luncheonette](#), was started during FY22 and completed at the beginning of FY23. The iconic Newton diner and 2022 MassRecycle award winner, has exemplary recycling and food waste diversion programs. The diner partners with local environmental groups such as Green Newton on a variety of sustainability initiatives, and shares information on their food scraps composting program with customers through interactive signage. RecyclingWorks supported Johnny's Luncheonette by designing multilingual signage to help staff to identify acceptable and non-acceptable items for food scraps and recycling receptacles. Collecting both pre- and post-consumer food waste, Johnny's Luncheonette diverts 600-700 pounds of organics per week for composting with Black Earth Compost. This case study serves as inspiration for other medium-sized restaurants that are subject to the lowered threshold commercial organics disposal ban enacted on November 1, 2022.

"Imagine if all restaurants were composting—what could we take on next?"
 – Kay Masterson, Co-Owner of Johnny's Luncheonette



[Click here](#) to view the video and written case study featuring Johnny's Luncheonette

Another [written case study](#) published this year features two businesses with textile and mattress recycling programs. Following coordinated efforts with the technical assistance staff, Ecos Properties' renovation project diverted well-over 12 tons of material, including linens, mattresses, and e-waste, from disposal through recycling and reuse. The effective partnership between Worleybeds Factory Outlet and HandUp Mattress Recycling & Upcycling was also highlighted by CET. The partnership led to the recovery of nearly 500 mattresses and box springs, which diverted over 12 tons from disposal in

one year. The spotlights were shared on [Facebook](#) and [Instagram](#) and posted to the RecyclingWorks website.



[Click here](#) to view the written case study featuring Ecos Properties and Worleybeds

Marketing Materials

In FY23, CET prioritized development of new marketing materials to support increased awareness of the waste ban changes effective November 1, 2022, and made concerted efforts to reach non-English speaking audiences and Environmental Justice communities. Examples include:

- A list of restaurant-specific resources related to the organics disposal ban changes, in both [English](#) and [Spanish](#), that was posted to the RecyclingWorks restaurant sector webpage and promoted by the Mass Restaurant Association.
- An existing marketing flyer about the organics waste disposal ban changes was adapted to include [information about textiles and mattresses](#) and translated into [Spanish](#).
- One-pager compiling program resources related to the organics waste ban changes for food rescue organizations.
- A quarter-page ad in the Massachusetts Health Officers Association (MHOA) roster/conference booklet that included an announcement about the organics waste ban disposal changes.
- Informational postcards in Spanish promoting waste reduction assistance. These postcards were mailed to 26 Latin restaurants in Worcester to advertise in-person site visits that occurred on May 9-10, 2023.
- The existing program flyer/rack card, and two recycling training graphics were translated into five additional languages: Spanish, Portuguese, Cape Verdean, Simplified Chinese, and Haitian Creole.

MassDEP Waste Disposal Ban Changes

Effective November 1, 2022

MassDEP is adding **textiles & mattresses** to the list of materials that are banned from disposal. Massachusetts businesses & institutions generating **one-half ton of food material or more per week** will also be subject to the existing food waste disposal ban.



Contact RecyclingWorks in Massachusetts for help getting started: recyclingworksma.com | (888) 254-5525 | info@recyclingworksma.com

Easy & Cost-Effective Ways to Comply

- Reduce **food waste** through prevention techniques, donation of edible surplus, and separation of scraps for composting, anaerobic digestion, or animal feed
- Repurpose **textiles**, donate to reuse organizations, or partner with textile recyclers
- Recycle **mattresses** or donate lightly-used mattresses through local, national, and international programs



CLICK HERE FOR ASSISTANCE

RecyclingWorks in Massachusetts is a recycling assistance program funded by the Massachusetts Department of Environmental Protection (MassDEP) that helps businesses and institutions reduce waste and maximize recycling, reuse, and food recovery opportunities.

CAMBIOS EN LA PROHIBICIÓN DE ELIMINACIÓN DE RESIDUOS DE MASSDEP

Efectivo el 1 de Noviembre de 2022

MassDEP va añadir **textiles y colchones** a la lista de materiales prohibidos. Las empresas e instituciones de Massachusetts que generan media **tonelada de alimentos o más por semana** también estarán sujetas a la prohibición de eliminación de desperdicios de alimentos.



Contacta RecyclingWorks en Massachusetts para recibir ayuda para comenzar: recyclingworksma.com | (888) 254-5525 | info@recyclingworksma.com

Maneras Fácil y Económico para Cumplir

- Reducir el **desperdicio de alimentos** a través de técnicas de prevención, donación de excedentes comestibles y separación de desechos para compostaje, digestión anaerobia o alimentación animal
- Reutilizar **textiles**, donar a organizaciones de reutilización o asociarse con recicladores de textiles
- Recicle **colchones** con poco uso o donelos a través de programas locales, nacionales e internacionales



DALE AQUÍ PARA OBTENER AYUDA

RecyclingWorks in Massachusetts is a recycling assistance program funded by the Massachusetts Department of Environmental Protection (MassDEP) that helps businesses and institutions reduce waste and maximize recycling, reuse, and food recovery opportunities.

Best Management Practices for Reusable Foodware

The development of Best Management Practices (BMPs) has become a critical aspect of the RecyclingWorks program, which produces guidance addressing specific business sectors, material types, and/or diversion strategies. BMPs are shared on the RecyclingWorks website, in presentations by CET and MassDEP staff, over the hotline, and to recipients of technical assistance. Moreover, the outreach and stakeholder engagement involved in producing BMPs establishes new contacts and strengthens existing relationships with service providers, generators, and government agencies. This comprehensive process supports the RecyclingWorks program and MassDEP goals.

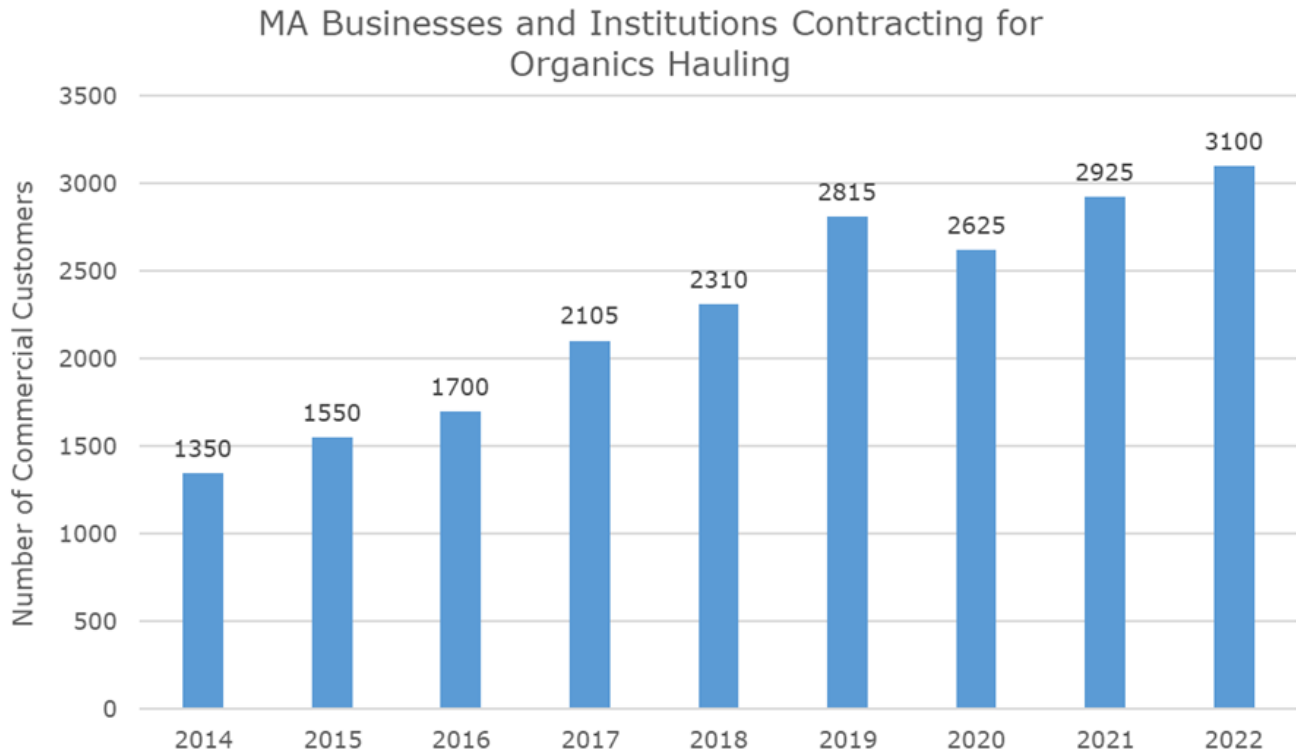
Providing guidance and technical assistance to help restaurants, colleges, and universities switch from single use to reusable food ware systems is a high priority identified in the MassDEP Reduce & Reuse Action Plan, published in December 2021.

CET and MassDEP initiated BMP development on this topic in FY23, in partnership with stakeholders from the Massachusetts Department of Public Health. Key stakeholders to engage include state and local health departments, restaurants and institutions with reusable food ware offerings, and service providers that support these systems. This project will continue throughout FY24, with the tentative timeline as follows:

- Summer 2023: Outreach to stakeholders.
- Fall-Winter 2023: Stakeholder listening sessions.
- Winter 2024: Draft guidance.
- Spring 2024: Incorporate feedback, final edits, and post to the RecyclingWorks website.

Marketplace Data

To measure growth in the food waste diversion marketplace, CET collects annual data directly from organics haulers on the number of commercial organics customers they serve in Massachusetts. In 2022, the number of businesses increased to 3,100. This represents a 6% increase compared to 2021. Since 2014, the number of commercial entities contracting for organics has increased by nearly 130%.



In FY19, CET began conducting annual interviews with food waste prevention technology platforms to quantify the collective impact of these technologies in Massachusetts. Each year, CET follows up with these technology companies to request an update on customer base and additional food waste prevented over the course of the previous year. All customer and diversion data are self-reported.

In the spring of 2023, CET staff interviewed 5 food waste prevention companies about activity during 2022. One company declined to share updates and 2020 data was used. During calendar year 2022, collectively these companies:

- Worked with nearly 580 commercial customers in Massachusetts.
- Prevented an additional 640 tons of food waste.
- Contributed to preventing more than 8,900 tons of food waste cumulatively since 2018.

CET will research new service providers and interview these platforms again in FY24 to evaluate changes in their impact over time.

Date Reported	Total MA Commercial Customers	New Annual Food Waste Prevented	Total Annual Food Waste Prevented (Cumulative Since 2018)	Companies Reflected in Data
2018 (all time)	145 customers	1,025	1,025	3
2019 (1 year)	154 customers	448	1,473	3
2020 (1 year)	296 customers	169	1,642	4
2021 (1 year)	447 customers	437	2,079	5
2022 (1 Year)	576 customers	640	2,719	5
Total Food Waste Prevented (All Time):			8,938 tons to date	

Outreach

The objectives of proactive outreach during FY23 included generating TAs, creating opportunities for virtual speaking engagements, recruiting event attendees, engaging municipalities, chambers of commerce, and other organizations as partners to reach new businesses, and adding new entities to the RecyclingWorks newsletter distribution list. As in previous fiscal years, CET prioritized outreach efforts that align with key MassDEP priorities for the year. Here are a few examples of outreach activities during FY23:

- Targeted outreach to:
 - **Priority business sectors that generate textiles, mattresses, and/or food waste** including restaurants, malls with retail and food service, hotels and venues, country clubs, mattress manufacturers and retailers.
 - Businesses located in or serving **environmental justice communities**.
 - **Minority and/or immigrant-owned** businesses.
- Relationship building with business and industry associations, chambers of commerce, and organizations that serve minority-owned businesses urging them to spread the word about the RecyclingWorks program and MassDEP waste disposal ban changes to their networks. Examples from FY23 include:
 - **Business and Industry Associations** - Massachusetts Restaurant Association (MRA), Retailers Association of Massachusetts, Sustainable Business Network (SBN), Secondary Materials and Recycled Textiles (SMART), MassRecycle, and the Environmental Business Council (EBC)
 - **Identity Organizations** - Black Economic Council of Massachusetts, BlackBoston.com, and the Latin American Business Organization (LABO).
 - **Chambers of Commerce** - Neponset River Regional Chamber, and the Greater Haverhill Chamber of Commerce.
- Leveraging existing relationships with businesses that received CET energy efficiency assistance to share information about RecyclingWorks technical assistance.

Events

CET attended, and/or presented about the RecyclingWorks program, waste disposal ban changes, best management practices, and other topics at 16 virtual and in-person events, reaching more than 1,117 attendees.

CET continued to optimize the use of virtual platforms, such as Zoom, to create effective virtual events which encouraged active participation from attendees. The ability to provide virtual events continues to allow for broader participation from different geographies in the state. CET anticipates continuing to deliver at least a portion of presentations in a virtual format during FY24, while also pursuing in-person opportunities when appropriate. See below for a complete list of events and presentations:

Event Name	Date	Event Name	Date
MassDEP Deconstruction Workgroup	9/28/2022	MassRecycle 2023 Annual Conference and Trade Show	3/23/2023
Massachusetts Health Officers Association (MHOA) Annual Conference	10/27/2022	EBC 9th Annual "Talking Trash" Conference: Northern New England	4/11/2023
MassDEP Organics Subcommittee Meeting	11/1/2022	Organics Disposal Ban Compliance Presentation	4/25/2023
Greater Haverhill Chamber Presentation	11/8/2022	Building Owners and Managers Association (BOMA) Boston Roundtable	4/27/2023
Leading By Example Group Presentation	11/15/2022	Latin American Business Expo	4/29/2023
Wellness Pet Company Presentation	1/17/2023	Cambridge Business Waste Reduction Presentation	5/10/2023
CommonWealth Kitchen Food Waste Reduction Class	2/23/2023	Annual Northeast Laundry Association (NELA) Conference Presentation	6/7/2023
2023 MEES Conference Workshop Presentation	3/8/2023	Environmental Business Council (EBC) 9th Annual "Talking Trash" Conference: Southern New England	6/20/2023

CET also attended and participated in events throughout the year where RecyclingWorks did not have a formal presentation role, such as the MassDEP SWAC meetings and corresponding subcommittees and working groups: Construction & Demolition Subcommittee, Organics Subcommittee, Market Development Working Group, Reduce & Reuse Working Group. During FY23, CET collaborated with MassDEP and other stakeholders to launch the new Deconstruction Workgroup, with an inaugural meeting in September 2023, which serves as an extension of the MassDEP Reduce & Reuse Working Group.

RecyclingWorks Fall 2022 Forum

In FY22, the US EPA discontinued the national WasteWise and Food Recovery Challenge programs, as it evaluates other potential business engagement program models. MassDEP and CET decided to continue hosting regular Forums to highlight important topics and showcase examples of successful commercial waste diversion programs.

The RecyclingWorks Fall 2022 Virtual Forum took place on November 9, 2022 with approximately 112 attendees. The forum focused on impacts and solutions for navigating waste ban changes enacted on November 1, 2022. Speakers highlighted successful implementation of textile and mattress recycling initiatives:

- Worleybeds Factory Outlet described their mattress recycling program with and HandUp Mattress Recycling and Upcycling
- Needham Community Council Thrift Store highlighted their partnership with Helpsy to reuse and recycle surplus textile material from their store
- Bentley University demonstrated how they worked with SwagCycle to find creative recovery solutions to repurpose and redistribute university apparel with outdated branding.

Additionally, the Executive Director of Secondary Materials and Recycled Textiles (SMART) concluded the event with her presentation on how the organization promotes high standards and best practices for reuse and recycling of textiles.

CET fielded a post-event survey which received 26 responses. 84% of respondents indicated that the forum was either “extremely informative” or “very informative”. The RecyclingWorks team also followed up with respondents to provide guidance and technical assistance where requested. CET shared a [blog post](#) summarizing the event, and posted the presentations to the [RecyclingWorks Forums](#) webpage.

Technical Assistance

RecyclingWorks provides direct Technical Assistance (TA) to businesses and institutions to help implement or improve waste prevention, recycling, and food waste diversion programs. In September 2023, MassDEP and CET also agreed that K-12 schools interested in receiving on-site technical assistance to address waste ban materials including recyclables and food waste, are eligible to be served through the RecyclingWorks program. By administering both Green Team and RecyclingWorks programs, CET can seamlessly transition the schools we serve between the two programs.

There is significant customization for each facility we assist, to provide a valued and effective service:

- Mini TA is provided when the assistance needed is more than can be completed over the phone in a short amount of time, but not expected to exceed three hours of assistance.
- For on-site TA, CET recommends one of three established tiers to address the waste reduction/recycling opportunity based on several criteria, including interest, complexity, and potential diversion opportunity. These are estimated at the 10, 20, and 30-hour levels.

During FY23, CET provided Mini TA to 112 businesses total. Of these Mini TAs, 97 were completed during the fiscal year, and CET was able to quantify diversion of approximately 120 tons per year from 36 businesses.

CET provided in-depth tiered TA to 120 businesses during FY23. Two additional businesses were approved for assistance but did not proceed with a site visit. Out of 120 TAs, 87 were completed prior to the end of the year. Approximately half of these completed TAs resulted in documented diversion, totaling nearly 900 tons per year.

Actual waste diversion impact as a result of RecyclingWorks technical assistance is likely much greater as a result of education and iterative program improvements over time. Recipients of technical assistance often tout the benefits of the RecyclingWorks program, often serving as case studies and delivering presentations at RecyclingWorks events.

Type	# In Progress	# Completed	Total Assisted	FY23 Assistance Goal
Technical Assistance	33	87	120	140
Mini TA	15	97	112	115
Warning Letter Assistance	69	38	107	N/A
Totals	117	222	339	

MassDEP Warning Letter Recipient Assistance

During FY23, CET staff continued to conduct outreach to waste generators who received Warning Letters from MassDEP for waste ban non-compliance.

When a generator responds to CET’s outreach, CET encourages RecyclingWorks TA. In FY23, CET contacted 99 recipients of 107 Warning Letters with targeted outreach (often, a single TA recipient has received multiple letters). Out of these 99 businesses, 19 were referred to receive RecyclingWorks assistance and/or confirmed there were programs in place to address.

CET will continue engaging MassDEP warning letter recipients during FY24, including businesses that have been reported to MassDEP as not offering recycling services.

Trends and Lessons Learned from Technical Assistance

Textile Recycling Opportunities and Challenges

As a result of providing technical assistance to businesses generating **textile materials**, CET staff developed a more robust and nuanced understanding of the textiles marketplace in Massachusetts. For example:

- There are abundant outlets for reusable, wearable, or fabrics that can be cut into wiping rags.
- There are more recycling options than initially anticipated for synthetics and blended materials, such as linens generated by commercial laundries and hospitals.
- Challenging materials include scrap fabric, treated fabrics, and manufacturing remnants. Manufacturing textile remnants are often very small, different types of textile material

comingled. Some fabrics are contaminated with paper, staples, and other challenging material. Recycling options for these materials are limited and come with higher costs for small cutoffs and less desirable textile types.

Hauling and Processing Infrastructure for Recycling and Organics

- Many acquisitions have occurred in the waste hauling industry over the last several years, which can lead to communication challenges and outdated messaging on recycling equipment (e.g. containers labeled cardboard-only hauled with single-stream recycling). Amidst these changes, certain transitions have offered the RecyclingWorks team a chance to support businesses through signage and training. This opportunity arises as waste hauling companies recognize the need for improved recycling practices among their recently acquired clientele.
- Increasing hauling costs have been a common trend across the state. RecyclingWorks recommends businesses continue working with their current trash or recycling hauler if they are meeting the business' needs. However, many businesses also request a review of their existing waste contracts and information for alternative service providers. When possible, we strongly encourage no-cost waste prevention, reuse, and food donation strategies to lower disposal costs.
- Organics haulers accepting material for anaerobic digestion have expanded their services throughout Massachusetts, including Western and Central portions of the state and Cape Cod. However, hauling and composting capabilities remain somewhat constrained for non-food compostable items like bags and serviceware.
- Some service providers (haulers, end-sites, food recovery organizations) may not be prepared to assist businesses in languages other than English. When communication barriers arise between providers and generators, extra RecyclingWorks support is needed to ensure the continuous dialogue required for the establishment and upkeep of recycling, composting, and food donation initiatives.

Challenges Facing Waste Generators

- Some businesses are still reestablishing pre-COVID waste diversion programs. Disruptions led to program discontinuations and limited oversight, causing sorting mistakes. These businesses often benefit from RecyclingWorks-provided signage and staff training.
- Smaller waste generators, especially in densely populated urban areas, often have very restrictive space constraints for staging containers to collect additional waste streams. In these cases, it may be effective to facilitate shared recycling and organics diversion services among nearby waste generators.
- We continue to encounter businesses that are unaware of the waste disposal bans on easily recyclable materials (e.g. cardboard, paper). Many are relieved to discover that RecyclingWorks offers technical assistance for achieving compliance.

Compost Site Technical Assistance

To support food waste composting infrastructure in Massachusetts, and to help ensure well operated compost sites, RecyclingWorks continued to offer both Tier 1 and Tier 2 Compost Site Technical Assistance. CET renewed contracts with two composting industry experts that serve as consultants for the program; these consultants conduct site visits for approved facilities and produce reports based on their findings. CET conducts outreach to compost sites registered through either the MassDEP and the Massachusetts Department of Agricultural Resources (MDAR) that may be interested in accepting food scraps, including farms that CET engages through the Massachusetts Farm Energy Program.

In FY23, RecyclingWorks provided Tier 1 TA to three sites, and Tier 2 TA to one site. was also completed within the fiscal year. At the close of FY23, there are four compost site operations continuing to receive ongoing technical assistance.

CET also organized a Practical Skills Workshop for Commercial Compost Site Operators, with an emphasis on composting food materials. The workshop was held in-person at Martin's Farm Compost & Mulch in Greenfield on May 15, 2023, with 28 attendees. Participants also received an online training module to complete in the weeks prior to the event. The workshop demonstrated compost site monitoring and troubleshooting through a hands-on activity, highlighted strategies to ensure positive neighbor relations, and included a tour of Martin's Farm's composting operation. This was the fifth RecyclingWorks practical skills compost training. According to commentary during the workshop and the three survey respondents, the training was well received, with a rating of five out of five stars.

Technical Assistance for Construction & Demolition Materials

Aligning with MassDEP priorities, RecyclingWorks program aims to increase the source reduction and reuse of building materials as well as the recycling of construction & demolition (C&D) materials.

The program also supported several institutions, general contractors, and building owners with technical assistance to salvage building material for reuse and increase C&D recycling. For example, RecyclingWorks provided technical assistance to Simmons University in Boston during the remodeling of its Park Science Center.

The massive reuse undertaking during the soft-strip phase of the project entailed one year's worth of planning and coordination among Simmons University staff, Elkus Manfredi Architects (and their dedicated team of staff volunteers), the City of Boston, Skanska, The Carbon Leadership Forum of Boston – Reuse Group, and RecyclingWorks.

A remarkable total of 12.2 tons of material (and counting) was recovered, comprising a diverse range of items. Among them were more than 125 furniture pieces, including desks, cabinetry, cabinetry hardware, chairs, stools, lab tables, and equipment such as microscopes and computer tables. Additionally, the project donated 300 pounds of glassware, including beakers, test tubes, flasks, specimen containers, and petri dishes. RecyclingWorks is continuing to offer recommendations during the demolition and construction phases of the Park Science Project and is providing technical assistance for the institution's campus-wide recycling and food waste diversion programs during FY24.

*For more than 45 years, the Center for EcoTechnology has helped people and businesses save energy and reduce waste.
For more information visit centerforecotechnology.org.*