

Town of Greenwich Department of Environmental Affairs

Application for Connecticut Department of Energy and Environmental Protection

Materials Management Infrastructure Grant Program Funding

Submitted December 6, 2024

Introduction. Through the Materials Management Infrastructure (MMI) Grant, the Town of Greenwich (Town) aims to expand its current food scrap recycling infrastructure and program for residents to increase community participation and quantities of waste diverted by using secure, fully enclosed units for organics collection that offer controlled 24/7 drop off access. These collection units will be sited on Town property in Old Greenwich, providing site control and increasing convenience and access to the program for residents.

In this initial MMI grant round, the Greenwich Conservation Commission is requesting \$15,892 for the purchase of three enclosures for the collection of food scraps and other organic material to expand the municipal food scrap recycling program, which was established in 2020. The Town intends to establish an enclosure station at Binney Park in Old Greenwich or Bible Street Park in Cos Cob as a first phase and then expand the program to additional sites in Central Greenwich and Western Greenwich. A phased approach is preferred to assess procedures, operations, costs and educational efforts on a smaller scale before investing further to ensure future success of the program.

In response to community feedback, the Town aspires to provide equitable access to the program, making drop off of food scraps easy, convenient and accessible for all residents. Through this project, the Town and its partners intend to educate residents, raising awareness about the state's waste crisis and the inequities inherent in the waste management system, and to offer them effective tools and solutions to reduce waste in the community.

The Town of Greenwich, a community in the southwest corner of Fairfield County, has an economically and culturally diverse population of 63,518 residents. The Town's population has grown by 4% since 2010. Of the town's 22,620 households, 67% are homeowner households. The municipality covers approximately 50 square miles, stretching from Long Island Sound to the backcountry and encompasses seven hamlets or villages, including Cos Cob, Old Greenwich, Glenville and Greenwich, which covers the historic center.

Greenwich is a member of the Connecticut Coalition for Sustainable Materials Management (CCSMM) and achieved silver-level certification by Sustainable CT in 2018, 2021 and 2024, adding Climate Leader designation in 2024 for its accomplishments for exceptional leadership in addressing climate change and fostering resilience.

State of Waste in Greenwich. According to CT DEEP's 2015 waste characterization study, food scraps make up 22.3% of Connecticut's municipal solid waste (MSW).

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¹ Data Haven, Greenwich 2023 Equity Profile.

Reduction of wasted food through prevention, donation and recycling is one of the most promising strategies to cut the waste stream and to address the state's waste management crisis, which was precipitated by the closure of the MIRA incinerator in Hartford, aging waste infrastructure and declining regional disposal capacity. Forty percent of waste generated in Connecticut is now exported out of state to landfills and incinerators. The Town of Greenwich trucks its municipal solid waste across the border to the WinWaste Westchester waste-to-energy facility in the environmental justice community of Peekskill, New York.

There are significant environmental and public health impacts of the current waste management system, as well as fiscal repercussions. As capacity continues to shrink in the state and the broader region, tipping fees are projected to rise exponentially, putting even more pressure on municipal budgets and residents. Further, when the permit for the WinWaste Westchester incinerator expires in 2029, the facility will be the oldest incinerator in the country at 45 years old. The average retirement age of a waste-to-energy plant is estimated to be 26 years. In just five years - if not before, the Town of Greenwich will need to find an alternative solution for disposal of its waste.

	Town of Greenwich MSW Quantities (Tons)									
Fiscal Year	MSW Hauled from Holly Hill	MSW Hauled Out of Town	Total MSW Production							
FY 19/20	35,287	-	35,287							
FY 20/21	24,990	10,797	35,787							
FY 21/22	28,955	9,347	38,302							
FY 22/23	30,153	8,535	38,688							
FY 23/24	30,582	9,600	40,182							

Table 1. Town of Greenwich MSW Quantities from FY 19/20 to FY 23/24.

MSW A	MSW All In Disposal Costs								
Fiscal Year	MSW Costs (includes operations & hauling/disposal)								
FY 20/21	\$2,978,615								
FY 21/22	\$3,346,063								
FY 22/23	\$3,518,591								
FY 23/24	\$3,733,662								

Table 2. Town of Greenwich Total Disposal Costs for MSW from FY 20/21 to FY 23/24.

However, the community is already experiencing the fiscal effects of an unsustainable waste management system and growing quantities of waste. The total MSW production in the Town of Greenwich has increased year over year from 35,287 tons in FY 19/20 to 40,182 tons in FY 23/24 (Table 1). Costs have also risen from \$2.979M in FY 20/21 to

\$3.734 in FY 23/24 (Table 2). In June 2024, the tipping fee paid by commercial haulers for MSW increased from \$112/ton to \$119/ton to cover escalating expenses.

Food Waste Reduction Initiatives in Greenwich. To address the growing waste management crisis, the Town of Greenwich and its community partners have made strides towards the reduction of wasted food. In accordance with the CCSMM Menu of Options, the Comprehensive Materials Management Strategy and the state's established integrated hierarchy of waste management methodologies, the Town and its community partners have prioritized the prevention and donation of food and provided education and outreach about the reduction of wasted food through the following initiatives:

- Save the Food Campaign: Since 2020, Greenwich Environmental Affairs has partnered
 with Save the Food, a PSA campaign designed by the Natural Resources Defense
 Council and Ad Council. The local nonprofit Waste Free Greenwich promotes Save the
 Food's branded assets and tools on social media, at outreach events and in
 presentations, promoting planning, storage and cooking strategies to prevent food from
 going to waste in the first place.
- <u>Food Rescue</u>: Community volunteers from Food Rescue US-Fairfield County rescue surplus food from local restaurants, schools, grocery stores and healthcare facilities and redistribute it to receiving agencies responsible for nourishing people who are food insecure. From 2022 to present, over 1.2 million pounds of food have been rescued in Greenwich.
- Educational Events: Perrot Memorial Library and Waste Free Greenwich have organized author talks and cooking demonstrations with Racquel Rivera (2021), Lindsay-Jean Hard (2021), Tamar Adler (2023) and Terry Walters (2023) to teach the community how to upcycle scraps and leftovers. For the last three years, the Greenwich Conservation Commission and Waste Free Greenwich have organized "Merry, Bright & Waste Free Holidays" highlighting strategies for food waste reduction during the holiday season. In 2024, Waste Free Greenwich and Harrison Public Library hosted a presentation by food waste advocate Jacquelyn Ottman called "Using Them Up: How the World Makes Leftovers Taste Like New," and Cos Cob Library partnered with Waste Free Greenwich for "Food Matters: Impacts and Solutions for Greenwich."
- <u>Greenwich Food Matters Challenge</u>: In spring 2022, Greenwich Environmental Affairs, in partnership with Waste Free Greenwich and the Center for EcoTechnology, challenged six local businesses to reduce food waste through prevention, rescue and recycling by participating in the Greenwich Food Matters Challenge.
- <u>Commercial Organics Recycling Law:</u> Greenwich Public Works and Greenwich Environmental Affairs, in collaboration with Waste Free Greenwich and Food Rescue US-Fairfield County, have conducted outreach efforts, including letters, emails and an

informational webinar, to inform large food waste generators in Greenwich about the Commercial Organics Recycling Law, which will go into effect for the first time in the town on January 1, 2025. Information includes strategies for preventing, donating and recycling wasted food.

- ReThink Waste Fair: Since 2022, Waste Free Greenwich has organized the ReThink Waste Fair, an event featuring eco-friendly vendors, environmental partners and hands-on activities and exhibits, as well as a recycling drive. Reduction of wasted food is always a focus of the event with a Save the Food display and cooking demos using food scraps. This year Sherill Baldwin and Chelsey Hahn of CT DEEP attended the fair in celebration of CT Food Waste Prevention Week, reading Governor Lamont's proclamation, hosting an exhibition table and leading a trivia game.
- Zero Waste Schools Program: An initiative of Greenwich Public Schools Facilities, the PTA Council Green Schools Committee and Waste Free Greenwich, the Zero Waste Schools program features prevention strategies, share tables and external donation through Food Rescue US-Fairfield County to reduce trash tonnage in school cafeterias and mitigate the associated environmental and financial costs of wasted food.

Although prevention and donation are preferred strategies in the wasted food scale, diversion through anaerobic digestion and composting is an important strategy to recycle organic matter and nutrients to boost soil health and ecosystem resilience and to generate renewable biogas and nutrient rich digestate. Several local nonprofit organizations, including Greenwich Audubon, Greenwich Botanical Center and Waste Free Greenwich, host workshops to educate residents about backyard composting. Since 2022, over 4 tons of pumpkins and gourds have been diverted to compost during Waste Free Greenwich's Great Pumpkin Rescue event. Further, the majority of independent schools in Greenwich implemented food scrap recycling programs several years ago, and six public elementary schools launched food scrap recycling in their cafeterias last school year with more roll outs planned in 2025.

Greenwich Municipal Food Scrap Recycling Program 2020-2024. The Town of Greenwich recognizes that almost half of food waste occurs at home² and has concentrated more efforts on residents. Over four years ago, a voluntary food scrap recycling program was established to divert food scraps from the municipal waste stream and address its waste management challenges. Residents source separate food scraps and other organics at home and deposit the collected material at designated drop sites. The program accepts all food scraps, including bones, shells, meat and dairy, as well as cut flowers, small houseplants and non-recyclable paper, like paper towels and napkins. The hauling of the collected material is subcontracted to Curbside Compost, which transports the organics to New Milford Farms in New Milford,

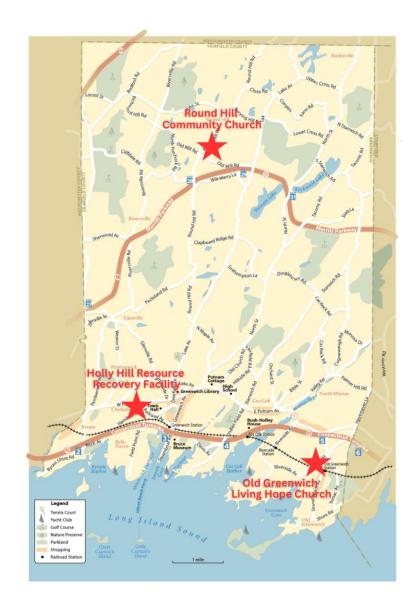
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² ReFED (November 21, 2024)

Connecticut for processing into compost. Waste Free Greenwich hosts a Compost Giveback Day in spring for participants, bringing the process full circle.

In June 2020, the Town of Greenwich, in collaboration with Greenwich Recycling Advisory Board, Waste Free Greenwich and Greenwich Green & Clean, launched a voluntary, drop off program for food scrap recycling at Holly Hill Resource Recovery Facility. The transfer station is located on the western side of town with access available to permitted residents during hours of operation: Monday-Friday 7am-2:30pm and Saturday 7am-12 noon. The drop site is managed by the Department of Public Works. To date, residents have diverted over 160 tons of food scraps and other organic materials from MSW at the Holly Hill facility.

In response to community feedback, two satellite drop sites were established to increase convenience and accessibility to the program. In June 2021, collection started at the Old Greenwich Farmer's Market at Living Hope Community Church in Old Greenwich on the eastern side of town. The location primarily services residents in Old Greenwich, Riverside and North Mianus, who live 20-30 minutes from the transfer station. The farmer's market runs from May to November and is open on Wednesday afternoons 2:30-6pm. Collection continues in the off season at the church on Wednesdays 12-2pm. Waste Free Greenwich operates and manages the drop site all year round with its team of volunteers overseeing drop offs, monitoring contamination, educating residents about the program and selling composting starter kits and BPI-certified compostable bags. Nearly 82 tons of food scraps have been diverted at the Old Greenwich location to date.



In January 2022, another collection location was provided at Round Hill Community Church. Hours of drop off are on Wednesday mornings from 10am-12pm. The Round Hill location was established to provide residents in the backcountry, the northernmost part of Greenwich, an opportunity to use the program. The site is managed by volunteers from the church as part of their Creation Care initiative with support from local nonprofits - Waste Free Greenwich and Greenwich Green & Clean. To date, over 23 tons of food scraps have been collected for composting at Round Hill.

Since summer 2020, the community has diverted over 263 tons of organic material in total from incineration to higher use as compost through the Greenwich food scrap recycling program. In fiscal year 2023/24 alone, residents separated nearly 80 tons of organic material for processing as compost through the municipal program. Tonnages collected have increased each year, but they continue to be a fraction of the potential food residual that could be captured and diverted from the waste stream.

Program Growth & Challenges. Participation in the Greenwich food scrap recycling program is growing slowly but steadily. Based on sales of composting starter kits and monitoring of drop sites, it is estimated that 7-10% of the 22,620 Greenwich households³ currently participate in the program. However, ongoing communications with residents and a recent survey (Appendix B) conducted by Waste Free Greenwich revealed that there are significant barriers to participation. Survey respondents, who were not currently using the program, cited that the locations of the drop sites were inconvenient (38.6%) and the times of drop off were limiting (40.6%). On the other hand, 65.9% of program participants indicated that the location of their preferred drop site was convenient, but more than half noted that the available hours were only moderately convenient or inconvenient. `

Other barriers cited in the survey include difficulty of parking at satellite drop sites, unaffordability or lack of a Holly Hill permit, heavy traffic at the transfer station, and use of backyard composting. Residents have also complained about the loud noise, odors and presence of birds and insects at the Holly Hill location, as noted in the selected comments in Appendix B.

Access for All: 24/7 Enclosures. In light of this feedback and the need to increase program tonnages and participation, the Town of Greenwich proposes the use of secure, fully enclosed units for food scrap collection that offer controlled, 24/7 drop off access to increase accessibility and ease of the food scrap recycling program. The Town first learned about the 24/7 units through the meeting of the Solid Waste Advisory Committee on June 25, 2024 and subsequently contacted other municipalities that have implemented this system or are considering adopting the units. Conversations with

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³ Household number provided by DataHaven, *Greenwich Equity Profile 2023*.

MetroStor and BigBelly ensued to gather information about their products, logistics and costs. Two organics hauling companies were also consulted to better understand the costs of hauling, procedural requirements and the features of an ideal site.

Site Identification & Evaluation. Locations for the 24/7 units were selected and prioritized based on survey results, which indicated a preference for the following neighborhoods:

- 54.5% Eastern Greenwich (including Old Greenwich 19.5%, Riverside 22%, North Mianus 13%)
- 35.8% Cos Cob
- 25.2% Central Greenwich
- 21.2% Western Greenwich (including Byram 5.7%, Pemberwick/Glenville 13%, Chickahominy 2.4%).

Over twenty locations were investigated and evaluated according to the following set of nine criteria for optimal functionality, cost and safety: 24/7 access, hauler access, ample parking, ease of turn around, low congestion, adjacent trash, space for multiple units, hardscape availability and shade. Each location was scored, and any site with a value of 7 and below was excluded from the priority list shown in Table 3.

Proximity to I-95 and Route 1 was also a consideration for placement of the enclosures, as the southern corridor along these roadways is where the largest concentration of residents live and a disproportionate number of businesses are located. The community is experiencing growing transportation challenges, including gridlock and poor air quality. Expanding options for drop off of food scraps and locating stations closer to homes and businesses can help alleviate congestion on these main arteries and even encourage multimodal transportation like bicycles and pedestrians.

Prospective sites were discussed with the appropriate Town departments and supervisory bodies, including Greenwich Communities, Parks and Recreation, Parking Services and The Nathaniel Witherell. Greenwich Parks and Recreation approved the following locations under their purview: Binney Park, Bible Street Park, Grass Island, Bruce Park and Pemberwick Park. The parking lot at Cos Cob train station, as well as the Horseneck parking lot which services Greenwich train station and hosts a Saturday farmer's market from May to November, are under consideration by Greenwich Parking Services. Discussions are ongoing with Greenwich Communities, formerly known as The Housing Authority of the Town of Greenwich, as their Board of Commissioners will not meet until early December. However, these properties are owned by Greenwich Communities, not the Town of Greenwich.

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East	Adams Garden	~	~	~	~	~	~	~	~	~	9
Ш	Binney Park playground	~	~	~	~	~	✓	~		~	8
8	Cos Cob Train Station Lot #1	~	~	~	~		~	~	✓	~	8
Cos Cob	Cos Cob Train Station Lot #2	~	~	~	~	✓		~	~	~	8
ŏ	Bible Street Park	~	~	~	/	~	✓	✓	✓	~	9
jċ F	The Nathaniel Witherell	~	~	~	~	~	✓	~	~		8
Central Greenwich	Wilbur Peck	~	~	~	~	~	✓	~	~	~	9
25	Horseneck Parking Lot (near trailer)	~	~	~	~	~		~	~	~	8
ıtral	Grass Island Dog Park	~	~	~	~	~	✓	~		~	8
<u>.</u>	Bruce Park Picnic Area	~	~	~	~	~	✓	~		~	8
West	Armstrong Court	~	~	~	~	~	✓	~	~	/	9
Š	Pemberwick Park Parking Lot	✓	~	~	✓	✓	✓	✓	✓		8

Table 3. Priority list of 24/7 food scrap recycling enclosure sites. Additional sites that did not meet the project criteria include: Quarry Knoll, Bruce Park ball field & playground, Town Hall, Riverside Train Station, Old Greenwich Train Station, Western Greenwich Civic Center, Cos Cob Park, Byram Park and Eastern Greenwich Civic Center.

PHASE I PROPOSAL

Program Location. Through the first round of the MMI grant, the Town of Greenwich intends to place three enclosures in either Old Greenwich or Cos Cob. The primary site for the enclosures in Old Greenwich is Binney Park, although Adams Garden, a low and middle-income apartment complex managed by Greenwich Communities, is still under consideration (see Appendix A). In Cos Cob, the enclosures would be located at Bible Street Park.

The Old Greenwich enclosure station would principally service three neighborhoods in eastern Greenwich: Old Greenwich, Riverside and North Mianus, although it is a popular area easily accessed from other parts of town. Residents indicated a preference for these neighborhoods in the community survey with ~55% of respondents choosing either Old Greenwich, Riverside or North Mianus. Old Greenwich is also located approximately 7 miles from Holly Hill Resource Recovery Facility, requiring about a 20-30 minute trip.

Cos Cob is centrally located and a major thoroughfare for residents. The enclosure station would provide easy access to the program to adjacent neighborhoods in eastern and central Greenwich. The survey revealed that 35.8% of respondents requested the enclosures be sited at Cos Cob.

Another major benefit of siting the enclosures in Old Greenwich or Cos Cob is that the municipal food scrap program is well established in eastern Greenwich and has a high participation rate. Between July 10 and August 21, 2024, an average of 72 residents dropped off food scraps during a three and a half hour window on Wednesday afternoons at the Old Greenwich Farmer's Market, as was recorded by volunteers. From January to November 2024, 1.9 tons of organics were collected per month on average at the drop off site.

The goals of the expanded program are: 1) to double the number of participants; 2) to significantly increase the tonnage collected, ideally doubling current quantities collected at Old Greenwich; and 3) increase accessibility and ease of drop off. Participation can be tracked by the app and web-based portal. By using the enclosure system, the capacity of food scrap collection will increase. If the hauler picks up twice weekly, the units can collect a maximum of three tons of material per month, and with three times a week pick up, the tonnages will increase to a maximum of four and a half tons per month. Tonnages will be recorded both by the app/web based portal and by the organics hauler. The data collected will be analyzed monthly by the Greenwich Department of Environmental Affairs and Waste Free Greenwich, while a follow up survey will be sent to registered participants to ascertain ease and accessibility of the 24/7 enclosures.

The first phase will offer the opportunity to evaluate procedures, operations, costs and educational efforts on a smaller scale before investing further in the new system. This approach will ensure future success of the program. Following the project at Old Greenwich or Cos Cob, the Town aims to expand the program to additional station locations, including Central Greenwich and Western Greenwich with preference for sites Horseneck Parking Lot and Pemberwick Park (see Appendix A for evaluations and images of sites). These locations will cover the areas of Town with the largest population centers located close to Route 1 and I-95 (Figure 2). The Town aims to apply for the second round of MMI grant funding for capital expenses for this second stage.

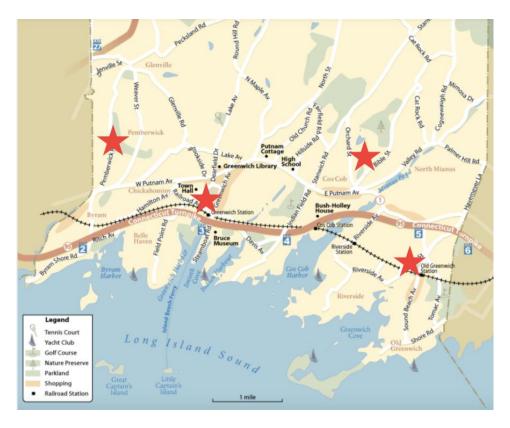


Figure 2. Map of Greenwich showing locations of enclosure stations at Pemberwick Park, Horseneck Parking Lot, Bible Street Park and Binney Park as indicated by the red stars.

Program Description. For first phase, the same types of materials, including all food scraps, non-recyclable paper and cut flowers, would be accepted as in the existing municipal food scrap recycling program. This consistency in guidelines will increase the likelihood that contamination rates will remain low. Contamination and unauthorized use can be further controlled through the mobile app which residents use to unlock the bins. The access points on the unit remain open for a designated time before locking. The fully enclosed units which are solidly constructed of stainless steel also prohibit rats and other pests from access.

Both MetroStor and BigBelly provide software for waste management, monitoring and reporting. The web-based management systems indicate where and when collections are needed and track participation for the entire program, as well as use on a bin-by-bin basis. Resident use patterns and food waste volumes are also collected via web interface, which can be used for reporting and analyses. Moreover, data on tonnages will be compiled and shared by the contracted hauler, allowing for redundancy in data collection. A fill sensor measures bin fullness preventing overfilling and informs the contracted organics hauler where and when collections are needed. The hauler will pick

up the material two to three times a week as necessary and transport it to a licensed composting facility.

Fiscal Impact & Funding Request. The Town of Greenwich intends to establish one enclosure station with three 65-gallon units at Old Greenwich or Cos Cob. If the internal toters are regularly filled to maximum capacity and collected three times a week, approximately 58.8 tons of organic material can be diverted annually from incineration. At \$119 per ton, the program is projected to save \$6,962 in tipping fees annually.

Based on estimates from MetroStor, the capital costs of the three units total \$15,892. A detailed listing of capital expenses is available in Table 4. The initial costs include the fill sensors, vinyl decals, enclosure customization, installation, freight and extended warranty, as well as expenses related to the app and software. The purchase of concrete pads may be necessary for proper installation, as the Binney Park site lacks a hardscape surface for the units.

CAPITAL COSTS	3 units
Cart enclosure with foot pedal (65 gallon)	\$5,760
Fill sensor	\$630
Vinyl decals	\$1,560
5-year extended warranty	\$1,980
Concrete Pad	\$1,500
Custom Colors	\$600
Installation Cost Per Unit	\$1,200
Freight @ \$900 per 3 units	\$900
Metro Key App	\$1,230
MetroKEY App Annual Subscription	\$432
Batteries	\$100
TOTAL	\$15,892

Table 4. Listing of capital expenses associated with the Old Greenwich Phase I Project.

First-year operating costs, including weekly hauling and educational materials, will be covered through the Sustainable CT Community Match Fund. The campaign will be launched in February 2025 by the Greenwich Conservation Commission in partnership with the local nonprofit Waste Free Greenwich. The crowdfunding goal of \$7,500 will be matched by Sustainable CT up to \$7,500. This project meets the eligibility criteria, as it aligns with Sustainable CT action 9.4, Reduce and Compost Organic Waste and the

Town of Greenwich is a silver-certified Sustainable CT registered municipality. In the next budget cycle, the Department of Public Works will appropriate funds to cover the hauling fees after the first year into the FY 2026/27 town budget.

Aligning with the CCSMM Menu of Options, the expansion of the food scrap recycling program provides a myriad of opportunities for "education, outreach and support for collection and diversion of food scraps and organics." Educational programming and outreach will be developed and implemented for the community by the local nonprofit Waste Free Greenwich. In-person and remote information sessions will be offered, as well as on-site demonstrations to teach residents about the app-based system and program guidelines. Outreach materials, such as flyers and mailers, will be distributed, and press releases and letters to the editor will be shared with the local news outlets. Information about the program will be publicized on the websites, newsletters and social media of the Town of Greenwich and its community partners. The graphics on the unit and the app are also effective tools to convey valuable information like messaging, customizable text and illustrations about reducing wasted food through prevention, donation and diversion.

Phase I Timeline, Implementation and Stakeholder Coordination. The project does not require permitting from local or state authorities or a solid waste permit from CT DEEP. Once the Town is advised of the MMI decision by January 18, 2025 the Conservation Commission and Waste Free Greenwich will coordinate with Sustainable CT to launch the Community Match Fund campaign in February 2025. In March 2025, the Conservation Commission will seek approval from the Greenwich Board of Estimate and Taxation to appropriate the funds for the project. The Department of Public Works, in conjunction with the Procurement Department, will develop and solicit a Request for Proposal for the purchase of the units, and once the contract has been rewarded, the contract will be reviewed by the Town's legal department and risk manager. The manufacturers have advised to allow eight to ten weeks for delivery of the enclosures. In the meantime, educational materials will be developed.

Grant funds will be held and dispersed by the Greenwich Department of Environmental Affairs. The Greenwich Department of Public Works will be responsible for the installation of the enclosure units, procuring the concrete pad and securing the units to the pad. The units require minimal maintenance, including changing the batteries every six to twelve months and lubricating the moving parts and locks biannually, which will be performed by Greenwich Environmental Affairs and Waste Free Greenwich. Quarterly reporting, as required by the MMI grant, will be executed by the Department of Environmental Affairs, with support from Waste Free Greenwich. A timeline is provided in Figure 3. For a matrix of project responsibilities, please refer to Appendix C.

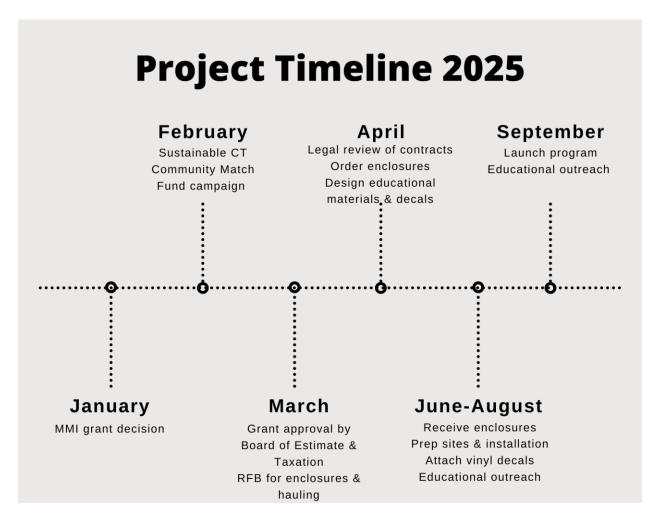


Figure 3. Project timeline 2025.

Environmental Justice Impacts and Waste Diversion. The project will address some environmental justice issues related to the current waste management system. According to the Greenwich United Way's 2021 Needs Assessment Report, Greenwich "stands out for its relative racial and economic diversity" among its peer communities. 22% of Greenwich's population is Asset Limited Income Constrained Employed (ALICE), and 34% of Greenwich's households are cost-burdened, meaning they spend at least 30% of their total income on housing costs.⁴

Chickahominy is the lowest income neighborhood in Greenwich with a high percentage of Hispanic (31.3%) and Black (9.1%) residents.⁵ It is also the host community to the Holly Hill Resource Recovery Facility, the town's transfer station. Chickahominy is burdened with heavy traffic caused not only by a large volume of resident vehicles but also heavy-duty tractor trailers traveling to and from the transfer station daily on local

⁴ Data Haven, Greenwich 2021 Equity Report

⁵ Greenwich United Way, Needs Assessment January 2021.

roads. There are between 900 to 1,200 resident and hauler vehicles visiting the transfer station on a daily basis, and 4,263 tractor trailers hauled material from the facility in FY 23/24. The Hamilton Avenue School, a Title 1 school with a minority student enrollment of 68%, is located just a half mile from the facility, as is Armstrong Court, a low- and middle-income housing development managed by Greenwich Communities.

In addition, Holly Hill Resource Recovery Facility was the site of a waste incinerator, which operated from 1938 to 1977 despite residential opposition. As reported in the CT Post, "Residents in the community had to contend with the fine black ash that rose from the incinerator's chimney as it burned tons and tons of garbage. Older residents today talk of curtains and linens darkened with soot, of homes where the windows were never opened." Although the incinerator is no longer in operation, traffic contributes to air pollution, noise pollution and increased traffic congestion in this neighborhood historically affected by toxic ash and other pollutants.

Expanding the food scrap recycling program may alleviate some of the traffic from the Holly Hill transfer station by providing alternative drop sites for organics that are neighborhood based and do not require a trip to the Chickahominy facility. Further, the contracted organic hauler will pick up collected food scraps from the units and bring them directly to a licensed composting facility or anaerobic digester rather than depositing them at Holly Hill. The new system will also open opportunities to residents, who cannot afford the \$25 permit fee to the transfer station, to be able to participate in the food scrap recycling program any time.

The program will help reduce the tonnages of MSW which are burned at the WinWaste Westchester incinerator in Peekskill, New York, which has been identified as an environmental justice community and disadvantaged community. Peekskill has a 98% ranking indicating a high vulnerability relative to other census tracts statewide in terms of "Environmental Burdens and Climate Change Risks," as well as "Population Characteristics and Health Vulnerabilities." The incinerator is the largest industrial polluter in Westchester County, responsible for 40,000 tons of nitrous oxides, over one ton of lead, and 840 pounds of mercury. The incinerator has also generated over 31.8 million tons of greenhouse gas emissions, in CO2 equivalents, releasing 800,000 tons per year. The population of Peekskill, of which 67.3% identifies as minority, is exposed to polluted air, while also struggling with poverty and unaffordable housing. Peekskill has higher rates of asthma, heart attack, and low weight birth rates than the rest of

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⁶ https://www.ctpost.com/local/article/Contamination-concerns-go-back-a-century-6081513.php

⁷ https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria

⁸ Estimates based on 2017 Air Emissions reported to New York State Department of Environmental Protection

⁹ New York State Department of Health, <u>Equity Report: City of Peekskill</u> (2021)

¹⁰ Westchester Children's Association, <u>2024 Community Snapshot</u>: Peekskill.

Westchester County. 11 The Old Greenwich enclosure station program, as well as the future expansion of the program to three additional sites, will help reduce the tonnages of waste burned in Peekskill, increase awareness in our community about the environmental injustices inherent in our waste management system and can be the impetus to implement other zero waste solutions in our community.

Finally, the Old Greenwich program, in conjunction with the future next phase, will increase accessibility to the municipal food scrap recycling program for all residents and enhance understanding about the importance of waste reduction in our community. There is a possibility that the enclosure units will be sited at properties under Greenwich Communities, which manages and owns 5.4% of the 5.7% of affordable housing in Greenwich. Adams Garden, a 91-unit complex offering low and medium-income housing, is the only Greenwich Communities property on the eastern side of town. It is conveniently located a few blocks from Route 1 in Old Greenwich, a location easily accessible for residents in Old Greenwich, Riverside and North Mianus. The site would offer expanded opportunities for residents of Adams Gardens to participate in the food scrap program. Enclosures would be located next to dumpsters, where the neighbors regularly deposit their trash and recycling, making food scrap recycling easy and accessible 24/7 for residents who may lack opportunities to participate otherwise.

The Town of Greenwich is grateful for the opportunity to expand its municipal food scrap recycling efforts through partnership with CT DEEP and the Materials Management Infrastructure Grant Program. By expanding its solid waste infrastructure with shovelready projects at targeted, Town-owned sites, Greenwich will be able to significantly, measurably reduce its solid waste stream in a manner consistent with the state's Comprehensive Materials Management Strategy.

¹¹New York State Department of Health, <u>Equity Report: City of Peekskill</u> (2021)

Appendix A: Preferred Enclosure Station Locations for the Old Greenwich Phase I Program: Binney Park (Old Greenwich) & Adams Garden (Old Greenwich), as well as for Phase II at Bible Street Park (Cos Cob), Horseneck Parking Lot (Central Greenwich) and Pemberwick Park (Western Greenwich)

Parks & Recreation: Binney Park Playground

Criteria: 8/9

- ☑ 24/7 Access
- ☑ Hauler Access
- ✓ Ample Parking
- ☑ Ease of Turn Around
- ☑ Low Congestion
- ☑ Adjacent Trash
- ☑ Space for Multiple Units
- ☐ Hardscape Foundation
- ☑ Shade Available







Greenwich Communities: Adams Garden

Criteria: 9/9

- ☑ 24/7 Access
- ☑ Hauler Access
- ☑ Ample Parking
- ☑ Ease of Turn Around
- ☑ Low Congestion
- ☑ Adjacent Trash
- ☑ Space for Multiple Units
- ☑ Hardscape Foundation
- $\ oxdot$ Shade Available





Parks & Recreation: Bible Street Park

Criteria: 9/9

- ☑ 24/7 Access
- ☑ Hauler Access
- ☑ Ample Parking
- ☑ Ease of Turn Around
- ☑ Low Congestion
- ☑ Adjacent Trash
- ☑ Space for Multiple Units
- ☑ Hardscape Foundation
- ☑ Shade Available

Notes:

SW exposure behind community center





Parking Services: Horseneck Parking Lot

Criteria: 8/9

- ☑ 24/7 Access
- ☑ Hauler Access
- ☑ Ample Parking
- ☑ Ease of Turn Around
- ☑ Low Congestion
- ☐ Adjacent Trash
- ☑ Space for Multiple Units
- ☑ Hardscape Foundation
- ☑ Shade Available

Notes:

Concern about B&GC construction



Parks & Recreation: Pemberwick Park Parking Lot

Criteria: 9/9

- ☑ 24/7 Access
- ☑ Hauler Access
- ☑ Ample Parking
- ☑ Ease of Turn Around
- ☑ Low Congestion
- ☑ Adjacent Trash
- ☑ Space for Multiple Units
- ☑ Hardscape Foundation
- ☐ Shade Available

Notes:

Two possible locations on site

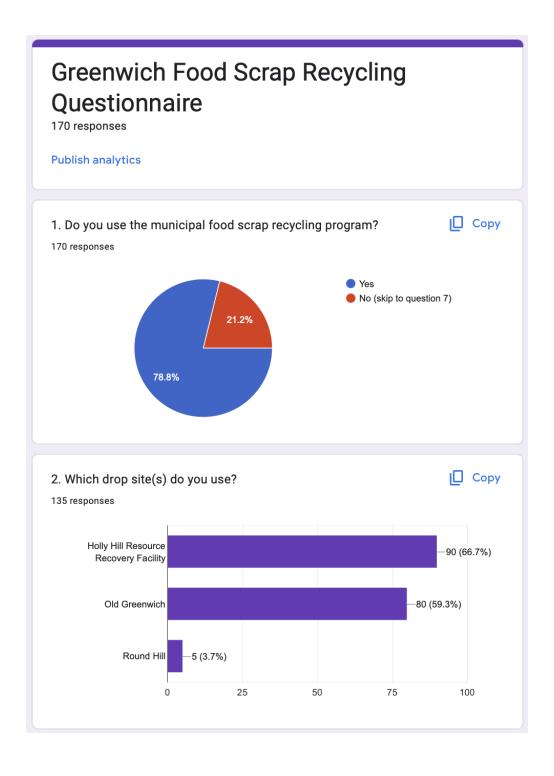


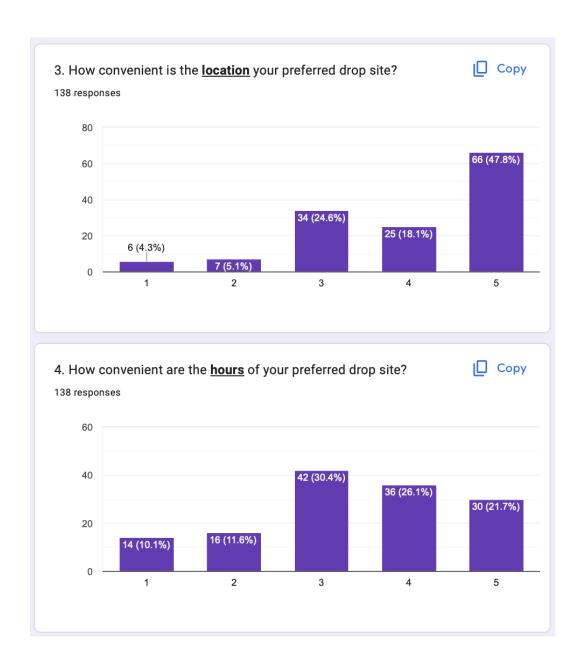


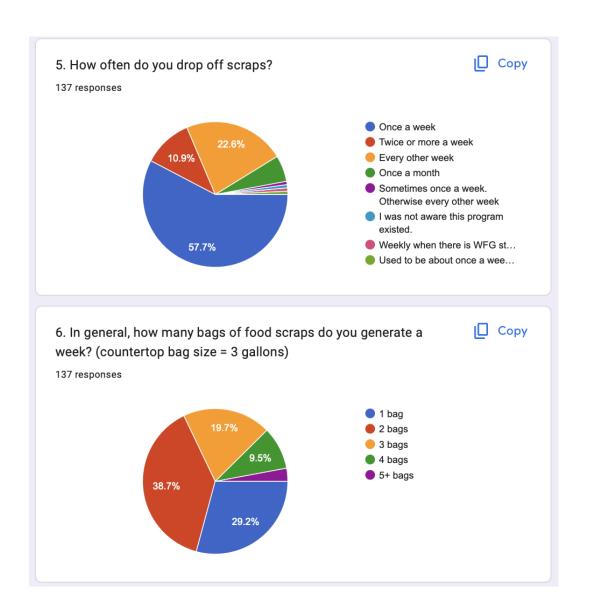


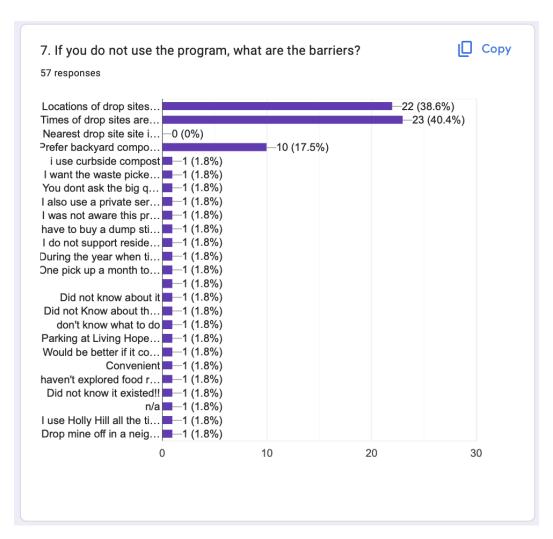


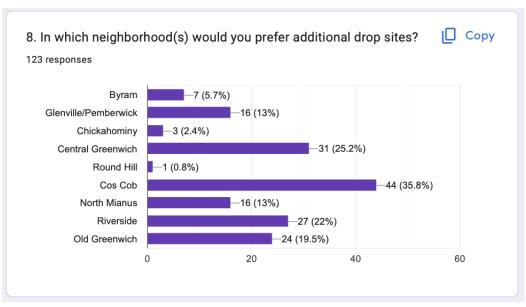
Appendix B: Waste Free Greenwich Food Scrap Recycling Survey (November 2024)











Selected comments:

"I find the local drop-off option in Old Greenwich much more desirable than driving across town to Holly Hill. However, during the Farmer's Market weeks, it is frustrating to have to idle in line for a parking spot in order to spend 30 seconds to drop off my compost. I wish that it was either at a separate time, or have the bins near the front circle where a quick, almost drive-thru & dump, option occurs. Also, perhaps another day to drop in Riverside or North Mianus, if OG Wednesdays don't work."

"The old Greenwich drop site is very convenient for me but when the hours change back to 12-2 on weds I can never use it."

"I have taken a (permanent?) break from this recycling because the limited hours for drop off are not convenient for working people like me."

"The main problem with OG site is during the farmers market months, it's too busy, with shoppers and food scrap drops there are so many cars you often have to wait for ages for a parking spot to open up."

"In Westchester county they have 24/7 drop off bins at town offices. This would be nice to have in Greenwich. As someone who works full time the only time I can drop food scraps off is Saturday which is difficult sometimes."

"REALLY limiting that it's only 1 afternoon. If I can't make it, I'm stuck. Holly hill too far. Would LOVE closer or more frequent drops."

"I do back yard composting since its more convenient, although I cannot compost of all my food scraps that way. Unfortunately I'm not out driving during the OG drop off hours often enough to make that routine work."

"I know a goal is a 24/7 style drop off in at least one location, and that would be great for those of us working traditional job hours!"

"The current drop off times are not convenient for people who work full time during the week, making this a program primarily for those who live in back country and OG and don't work. It would be helpful to have drop off sites in high density areas where a lot of people don't have room for backyard composting - Cos Cob, Byram, Chickahominy - and those are the areas in town where people who are most likely to work so times would need to be convenient for them."

"We need off spots that do not involve volume of traffic that occurs at Greenwich Recycling Center aka the dump."

Appendix C: Matrix of Program Responsibilities

	Environmental Affairs Assistant Director	DPW Deputy Commissioner	DPW - Recycling Coordinator	DPW - Communications	Legal Department	Risk Manager	Purchasing	Waste Free Greenwich	Organics Hauler	Enclosure Company
Installation										
Bolt units to hardscape		x								x
Order concrete pads		х								
Install concrete pads		х								
Maintenance										
Changing batteries in unit (biannual)	x							х		
Lubrication of locks & moving parts (biannual)	x							х		
Cleaning of units									x	
Periodic inspections								x	x	
Education										
Design of vinyl decal	x	х						X		
Order vinyl decal	x									
On site training of residents								X		
Draft educational materials	×			x				Х		
Educational presentations & outreach events	x							X		
Social media & press releases	×	х		x				Х		
Updated guidelines & tax flyers				x				Х		
Website design	×			X				х		
-										
Contract										
Review of enclosure contract					X	X				
Review of hauler contract					X	X				
Request For Proposal		X					X			
Analyses & Reporting										
Software training	х	х	х					х	х	x
Monthly data analyses of site usage	x	x								
Analyses of metrics & goals	x	х						x		
Quarterly reporting to CT DEEP for grant	х							x		
Quarterly reporting to CT DEEP for Town				x						