Short Term Disposal Solutions & Waste Diversion Continuous Improvement

CAPITOL REGION COUNCIL OF GOVERNMENTS
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Introduction

Project Background

Following adoption of the 2016 Comprehensive Materials Management Strategy[1] (CMMS) as a roadmap, CRCOG aims to work toward the statewide goal of 60% diversion of waste from landfills and waste to energy facilities by 2024. The CMMS constitutes a component of the revised CT Solid Waste Management Plan required by Public Act 14-94.[2] The strategic goals of the CMMS include:

- Modernization of solid waste and materials management infrastructure throughout the state.
- Management of (source) separated organic materials.
- Reuse and recycling of construction and demolition (C&D) materials.
- Development of recycling facilities, materials recovery facilities (MRFs), and other types of intermediate processing facilities.
- Recommendations for the development and implementation of regional and/or local recycling programs.
- Options for local compliance of municipalities with recycling requirements.

Connecticut Governor Lamont announced on January 24, 2023, a series of solid waste management proposals during the 2023 legislation session that includes a response to the MIRA closure. It should be noted that the announcement was released after RRS and Tetra Tech prepared this report.

The Connecticut Solid Waste System (CSWS) is a hub-and-spoke model that services seventy (70) municipalities throughout the state[3], including the majority of CRCOG communities. The hub of the system included a single-stream recycling facility and a resource recovery facility, both located in the South Meadows section of Hartford[4]. With the closure of MIRA's waste-to-energy (WTE) facility in Hartford and the state looking to develop long-term plans for managing MSW, there are rising concerns about future solid waste transportation cost and infrastructure investments.

In 2021, MIRA reported they had Municipal Service Agreements (MSAs) with forty-nine (49), forty-eight 48 with term through June 2027 with an opt-out in each March, and one-year delivery agreements with 30 private haulers. With the closure of MIRA's waste-to-energy (WTE) facility in July 2022[5] in Hartford and the state looking to develop long-term plans for managing MSW, there are rising concerns about future solid waste transportation cost and infrastructure investments.

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[1]Connecticut Department of Energy and Environmental Protection. (n.d.). Final Adopted Comprehensive Materials Management Strategy, Revised 12-14-2016. Retrieved September 23, 2022, from https://portal.ct.gov/-/media/DEEP/waste_management_and_disposal/Solid_Waste_Management_Plan/CMMSFinalAdoptedComprehensiveMaterialsManagementStrategypdf.pdf

[c] Public Act No. 14-94 An Act Concerning Connecticut's Recycling and Materials Management Strategy, The Underground Damage Prevention Program and Revisions to Energy and Environmental Statutes. 2014. Retrieved October 16, 2022, from https://www.cga.ct.gov/2014/act/pa/pdf/2014PA-00094-R00SB-00357-PA.pdf

[3] Materials Innovation and Recycling Authority (MIRA). (n.d.). Who We Are. Retrieved October 16, 2022, from https://www.ctmira.org/about/)

[4] IBID

[5] Materials Innovation and Recycling Authority (MIRA). (2021). MIRA's Waste to Energy Facility Current Status and Permit Modification. https://www.ctmira.org/wp-content/uploads/2021/12/MIRA-Presentation-informational-meeting-12-15-21.pdf

Project Objectives

The Capital Region Council of Governments (CRCOG) contracted with Resource Recycling Systems (RRS) and Tetra Tech to conduct a three-phase project. Task 1 is to conduct a system assessment and an infrastructure inventory. Task 2 is to identify short-term (1-5 years) solutions for waste disposal and increasing waste diversion. Task 3 is a high level, long-term (10-year) plan for resource recovery and disposal options. This document serves as the deliverable for Task 2.

Short Term Disposal Solutions: 1-5 Years Planning

Methodology

As the first step in identifying short-term disposal strategies, the project team conducted interviews with several solid waste facilities and performed additional research to gain an insight on the potential to expand management capacities and services.

The project team also analyzed CRCOG member town contracts to develop a database containing contract terms, rates and other relevant information for Task 2. In-person meetings were conducted with three (3) towns to gain further information on contracts, challenges and opportunities. This evaluation was performed to provide meaningful background and recommendations for CRCOG to aid in the transition to a Solid Waste Authority.

The project team also reviewed some of the operational issues that surfaced during the investigation process that are factors in selecting viable short term disposal strategies. For example, waste hauling truck wait times at the in-state WTE facilities are very long. This negatively impacts hauler collection routing and efficiencies. To address this operational issue, Transfer Stations tend to bale MSW for transporting to an out of state Landfill when the truck wait times are long. The impact of this particular issue is further discussed later in this section.

Existing Facilities

The Materials Innovation and Recycling Authority (MIRA) submitted a closure plan[6] to the Connecticut Department of Energy and Environmental Protection (DEEP) for its Hartford Waste–to-Energy Facility in May 2022.

The MIRA WTE facility in the South Meadows area of Hartford ceased operations in July 2022 and is in the process of closing the facility. The age and deterioration of the equipment and recycling processing infrastructure and failure to procure new investment led to the shut-down of the South Meadows WTE and recycling facilities. This is one reason why CRCOG needs to be more of an aggregator.

[6] https://www.ctmira.org/wp-content/uploads/2022/11/MIRA-RRF-Closure-Plan_May-2022.pdf

In September 2022, MIRA sent a letter to the remaining Connecticut Solid Waste System (CSWS) Participating Municipalities served by the Torrington and Essex Transfer Stations to initiate restructuring conversations focused on alternatives and options. The restructuring would include the transfer of transfer stations' contractual obligations to third parties; eliminating MIRA's role as a waste management service provider. Twenty-six (26) communities entered into private waste disposal contracts with the two transfer stations and left MIRA at the end of fiscal year 2022. MIRA's remaining twenty-three (23) towns were grouped into two (2) regional service areas: Eleven (11) towns that utilize the Essex Transfer Station; Twelve (12) towns that utilize the Torrington Transfer Station. These town numbers were provided by MIRA informally; confirmation is pending.

Tetra Tech reached out to MIRA in October 2022 to obtain feedback and recommendations for solid management to serve the CRCOG communities. While Tetra Tech had an insightful conversation with staff members, no information was shared beyond the fact that MIRA's waste-to-energy (WTE) facility in Hartford CT is closing. At MIRA's request, Tetra Tech submitted written questions to MIRA (CRCOG Task 2 Short-Term Solid Waste Disposal Solutions dated October 25, 2022, see Appendix). As of this report, MIRA has not responded.

Casella Waste Facilities – including Willimantic Waste Paper Company

Casella Waste recently purchased the Willimantic Waste Paper Company. With this acquisition, Casella now operates six (6) facility locations in Connecticut **(Table 1)**. The Willimantic Main Campus is located on the eastside of the Connecticut River. This main facility includes a solid waste transfer station and volume reduction facility (VRF), and a materials recovery facility (MRF) with a metal scrap yard. Casella holds the individual permits and operates the facilities. Casella is seeking to increase material receiving and storage capacities as summarized below, positioning Casella to increase services with CRCOG towns – discussions that are already underway.

Table 1 – Casella Connecticut Facilities

Town	Location	Facility Type
1. Willimantic	1590 W. Main Street	Transfer Station / VRF
2. Willimantic	185 Recycling Way	Intermediate Processing Center / MRF
3. Plainfield	54 Roode Road	Transfer Station / VRF
4. Franklin	182 Rt. 32	Commercial Cardboard Recycling
5. Killingly	246 Brickhouse Rd.	Municipal transfer Station
6. Norwich	73 Rogers Rd.	Municipal Transfer Station

The Willimantic Main Campus facility is currently operating below the permitted capacity. The Main Campus has two separate buildings and is located proximate to CRCOG member towns – well positioned to be a major solution provider for those towns, both for disposal capacity and to increase diversion of waste through recycling programs**.**

Casella is seeking a permit modification for the Willimantic Transfer Station/VRF for C&D and MSW, and also for the Willimantic MRF for single stream recycling. The company is currently in the permitting process to increase MSW and C&D capacities; however, this process has been underway for over three (3) years. The Willimantic Transfer Station/VRF is expected to increase the permitted capacity to up to 995 tons per day. The Willimantic MRF is expected to remain at the permitted capacity of up to 815 tons per day. The permit modification request is for equipment upgrades at the Willimantic MRF.

Table 2: Willimantic Transfer Station/Volume Reduction Facility

Material	Permitted Capacity	Current Tons/Day	Increased Tons/day	Expected Tons/Day
C&D materials, including sweeping, tailings, clean wood		325	75	400
MSW		300	200	500
Single Stream Recycling		10	15	25
Non-hazardous contaminated soils, sediments, industrial waste solids		0	70	70
Total		**635**	**360**	**995**

The Transfer Station/VRF is for the sorting, volume reduction, and transportation to landfill by rail of the processed C&D materials. MSW is transported to in-state WTE facilities. The waste hauling truck queuing time at in-state WTE facilities is excessive. As a result, transfer stations prefer baling MSW for transporting to out-of-state landfills.

The sorted C&D recycling materials are marketed by the Casella MRF. The bulk of the recovered materials is clean wood. Clean wood from C&D recycling was utilized at the Greenleaf Power LLC Plainfield Renewable Energy (PRE) cogeneration plant as biofuel. This was the main wood disposal

option until the biofuels facility went recently offline for equipment repairs and maintenance. The PRE cogeneration plant plans to be operational by end of February 2023.[7]

The MRF, also known as an Intermediate Processing Center (IPC), is for single stream recyclables, scrap metal recycling, and mattresses. The processing line for mattress recycling separates the wood, bales foam, metal and textiles for markets. Casella processes 70% of the mattresses disposed in the state.

Table 3: Willimantic MRF

Material	Permitted Capacity	Current Tons/Day	Expected Tons/Day
Single Stream Recycling		815 • 554 TPD: Paper, cardboard, commingled containers, mattresses • 260 TPD: Scrap metal • 1 TPD: Lead acid batteries	815
Total		**815**	**815**

Casella also collects source separated organics (SSO) and delivers the SSO to Quantum Biopower in Southington, CT. The new Hytone Ag-Grid Digester AD facility in Coventry, CT can be another outlet when the facility becomes operational in 2024. With additional organics management facilities available, Casella would be interested in offering organics service for commercial food waste generators and residential curbside collection.

[7] Tetra Tech called the Plainfield Renewable Energy (PRE) to confirm that the facility is currently offline and they plan to be operational in the next month.

Torrington Transfer Station Operated by Enviro Express

The Torrington Transfer Station is owned by MIRA and is constructed on a 4.7-acre parcel on Vista Drive in Torrington. The facility is operated by a third-party contractor, Enviro Express, Inc. of Bridgeport, CT, a waste hauling company. Tetra Tech conducted an initial call in December 2022 with Enviro Express. Tetra Tech requested additional information and clarifications as a follow up to the call in writing. As of this report, Enviro Express has provided limited information and photos.

The facility serves as a transfer point for MSW and recyclables generated by towns in the area. The operations include receiving, weighing, unloading and transferring MSW and recyclables. The facility currently serves nineteen (19) municipalities, including Salisbury, Torrington and other towns serviced by waste haulers including Panne and USA Waste, as well as several private haulers including CWPM and Rocco Carting.

The transfer station currently processes 25,000 tons per year (TPY) of MSW, recyclables, and some bulky items. It has the capacity to process 50,000-60,000 TPY and the permitted capacity is to be provided by the facility. It was noted that the transfer station can receive additional bulky items, such as furniture. The facility location is served by rail spur which has never been put into use. The state has not shown interest in rail for waste hauling according to the facility operator.

Torrington Transfer Station

Material	Permitted Capacity	Current Tons/Year	Capacity Tons/Year
MSW	TBD	25,000	60,000

Currently the transfer station is receiving half of its managing capacity, as most towns signed up with private waste hauling companies following the MIRA closure. The unused capacity is available for transporting MSW by rail or truck to out-of-state landfills.

Essex Transfer Station Operated by CWPM

The Essex Transfer Station is operated by CWPM LLC. Tetra Tech contacted CWPM and submitted questions to the waste hauler operator in writing. As of this report, CWPM has not responded to the request for information.

CWPM owns and operates three (3) permitted transfer stations in Berlin, Plainville, and New London, as well as three (3) municipal owned facilities.[8]

Waste to Energy Facility Challenges in Meeting Disposal Capacity Needs

There are a number of operational challenges with area Waste to Energy (WTE) facilities that impact the viability of both short- and long-term disposal solutions. Chief among them are wait times, reliability of service and lack of backup capacity – all of which contributed to the current challenges facing CRCOG communities.

As stated earlier there are ongoing concerns with waste hauling truck queuing time at in-state WTE facilities. Queuing times can exceed 2 hours. This disrupts the capacity of area haulers to meet their collection obligations in a timely and cost-effective manner.

This is further exacerbated by disruptive events. For example, a fire on December 11, 2022 at the Bridgeport WTF facility resulted in a shut down. Fortunately, the fire was controlled, but the fire caused a one-day service delay for waste haulers and MSW remaining in trailers caused odor issues and other vector problems.

The Enviro Express representative reported that another issue is with the variability in available MSW tonnage. The Bridgeport WTE facility cannot manage a surge in MSW, as the facility is permitted to accept 2,250 TPD[9]. Again, these uncertainties disrupt collection operations and create issues with service to both residential and commercial accounts.

The state needs to support a more robust disposal approach, where the WTE facilities are supplemented by a back-up or redundant system to manage solid waste materials due to scheduled or unscheduled WTE shutdowns. The available WTE capacity is incapable of handling these disruptions; therefore, a long-term strategy for in-state facilities should be developed. Expanded diversion programs can be part of this solution – taking pressure off of existing disposal capacity.

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[8] https://www.cwpm.net/our-company-history

[9] https://www.wtienergy.com/plant-locations/energy-from-waste/wheelabrator-bridgeport

Until these longer-term fixes are in place, the short-term solution is to maintain the current plan of transporting MSW to OH, PA or other areas that will take the trash, while increasing diversion through expanded recovery programs for all materials.

Interviews with Towns

Following are selected interviews with Towns to illustrate the scope of their programs and services and to provide insight into the perspectives of some of the CRCOG Communities.

Town of Mansfield

Tetra Tech conducted an in-person meeting with the Virginia (Ginny) Walton, Recycling Coordinator for the Town of Mansfield, on November 1, 2022 to discuss the current MSW contract. The town's original contract was with Willimantic Waste Paper Company, located in Willimantic, CT. The company was recently purchased by Casella Waste, and the town's contract ends in 2023. Casella is contracted for single family and multifamily service, and the majority of MSW goes to the Covanta WTE facility in Preston, CT. At the time of the interview, the town's recycling coordinator indicated that Casella was not interested in providing curbside organics collection but had suggested residential drop-off locations and quoted a $36 per pick up charge at the drop-off location.

The town is charged monthly for MSW services. For single family home service, the town is charged $36,000 per month and $15,000 per month for multifamily units. The town has 2,666 single family units and 2,700 multifamily units. The cost per single family home is around $13.50 per month and the cost per multifamily unit is $5.60 per month. The monthly cost for multifamily is expected to increase by approximately 9%, primarily because of the additional hauling fuel charge. Overall, the town reports that Casella provides good service.

The town absorbs the monthly MSW service costs into volume-based user fees (PAYT). For multifamily fees, there are several service sizes and pricing that are available on the town's website.[10] The single family MSW service includes the cost of recycling in the monthly MSW service fee. The cost per month is shown below.[11]

[10] Multi-family Trash/Recycle Service | Mansfield, CT (mansfieldct.gov)

[11] Mansfield is an outlier of CRCOG; none of its recycling goes to the Murphy Road facility. The town is part of Mid-NEROC with a 5-year contract that ends in 2024.

Table 4: Mansfield PAYT Rates

Single Family MSW Service	Recycling	Cost Per Month
22 gallon	64 gallon	$16/mo.
35 gallon	64 gallon	$22.75/mo.
64 gallon	64 gallon	$32/mo.
96 gallon	64 gallon	$43/mo.
160 gallon*	64 gallon	$56/mo.

*Note: 160-gallon rate is the 96 and 64 gallon together at $56/month, which is different from the 96 gallon at $43/month. The 160-gallon trash service includes a 96 gallon and 64-gallon MSW container and a 64 gallon recycling container, for a total of 3 containers.

Since 1990, the smaller containers were the most popular. Now the larger containers are increasing, typically to the 64 gallon. There is overall an increase in MSW container size.

Table 5: Mansfield PAYT Accounts

Single Family MSW Service	Number of Accounts	Note
22 gallon	644	Single Family
35 gallon	996	Single Family
64 gallon	204	Single Family
96 gallon	199	Typically, college students living together in a rental house.
160 gallon	53	Typically, college students living together in a rental house

Regulatory and Legislation

The Town of Mansfield indicated that CRCOG should become an advocate to prompt DEEP to take action for implementing solid waste infrastructure in CT. Moreover, CRCOG should work with the Legislature in planning for Extended Producer Responsibility (EPR) for packaging. There is a need for CRCOG representation to appear at the State House and to represent its member towns.

MSW and Recycling

Another area of need is for CRCOG to administer the management of PAYT programs and MSW contracts that towns can participate in. As outlined earlier in this report, there is a potential opportunity for CRCOG to provide technical assistance on these programs and potential for reduced cost through standardization. As an example, the Town of Mansfield manages the PAYT (unit-based size service) program administration that requires nearly 80% of the recycling coordinator's time. The Town of Stonington uses a bag system that might be more efficient than the unit-based size PAYT, however haulers are moving to automated service that does not work for curbside bag collection.

Organics

As the State moves forward with organics diversion to reduce MSW disposal and carbon emissions, a regional organics management/composting infrastructure system is needed. Many sizes of composting operations could service different areas of CRCOG and throughout the state. Leadership is required for businesses to be compliant with the commercial organics ban. As an example, the Price Chopper supermarket located at 1220 Storrs Road in Mansfield is separating food waste, but the Big Y supermarket located at 141 Storrs Road in Mansfield is not participating in organics diversion. There is a growing need for outreach and technical assistance for commercial entities in all CRCOG towns, and moreover, a consistent organics management strategy is needed throughout CRCOG. Part of the organics strategy could include providing food waste drop-off sites at transfer stations and creating a permit for municipal transfer stations to accept food waste at their yard waste/leave composting sites.

City of Hartford

The Project Team attended two meetings with the City of Hartford. At the request of CRCOG, Tetra Tech attended the Hartford Solid Waste Taskforce Meeting held virtually on September 28, 2022. Tetra Tech and RRS attended the second meeting with the City of Hartford's Chief of Staff, Mr. David Steuber, occurred on November 1, 2022. Mr. Steuber reinforced the needs of Hartford and refrained from providing information regarding MIRA, as he also serves on the MIRA board.

The Solid Waste Taskforce agreed on Environmental Justice (EJ), that both Hartford and Bridgeport have supported the region by hosting solid waste infrastructure. The Taskforce was firm on its desire for the state and CRCOG to engage with the City of Hartford and surrounding communities through an equity lens – a process that has been incorporated into the recommendations in this report.

Hartford expressed interest in:

- Identifying a suite of technologies for solid waste management, including recommendations for smaller scale infrastructure and types of treatment for organics management to remove the biodegradable fraction from landfill.
- CRCOG's role in the cleanup of the MIRA WTE facility site property and to provide comments on planning for the site. CRCOG will need to maintain dialogue with the City of Hartford to ensure community involvement.

- Remediation and permitting – is DEEP in a position to gain legislative support or would this be an opportunity for CRCOG?
- Education, public outreach, and stakeholder meetings for community feedback are necessary components for strategic planning over the next 3-5 years and should include funding (grant) opportunities.

Town of Manchester

Tetra Tech and RRS attended a meeting with the Town of Manchester Department of Public Works to gain insight on their potential plans for developing an organics management infrastructure at the town's existing solid waste campus.

The Town Solid Waste Campus includes an administrative building, a transfer station, yard waste composting using windrows, and a landfill. The town transfer station is for residents use to dispose of bulky items and hard-to-recycle materials including mattresses, furniture, appliances with freon, tires, and propane tanks. The town operates a landfill that accepts C&D waste materials, contaminated soils and non-hazardous waste materials, including bulky waste.

Manchester is not PAYT but the town issues 65-gallon wheeled carts for curbside MSW collection. MSW and recycling curbside collection is provided by the town through a private waste hauler. Currently the waste disposal contract is with All American Waste, Inc. and the material is transported to Murphy Road Recycling.

The town is considering expansion of its organics management to include an anaerobic digester to accept residential and commercial food waste. Services could be made available to other towns in conjunction with an upgrade of the existing transfer station facility. The town also is planning a food waste curbside collection pilot program.

Procurement Opportunities and Constraints

Methodology

Tetra Tech analyzed the waste disposal contracts for ten (10) municipalities within CRCOG to gain a better understanding of the waste disposal strategies currently utilized in the region. These communities include Andover, Avon, Bloomfield, Canton, Glastonbury, Manchester, Hebron, South Windsor, West Hartford, and Windsor. The municipalities of Manchester, South Windsor, and Windsor also provided curbside collection contracts that were analyzed in addition to the waste disposal contracts. The project team selected a variety of communities to analyze, including communities with unique contract holders and communities. Contracts were reviewed and the relevant information extracted can be seen in the sections below.

Findings

Contract Service Providers

One of the main takeaways was that there is limited choice variation in service providers. Many municipalities hold contracts with regional waste disposal entities, namely, Murphy Road Recycling, LLC (MRR) and Willimantic Waste Paper Company, Inc. (WWP), now owned and operated by Casella. Of the ten (10) communities, six (6) had contracts with MRR and two (2) had contracts

with WWP. These providers seem to be relatively ubiquitous in the region and have displayed initiative to service their customers' needs through changing market conditions, as described in the previous sections. Other service providers include Somer's Sanitation who services the town of Windsor and MIRA's hauling contractor for the town of Canton.

Contract Durations

Many of the provided contracts are in effect for the short-term future and expire between now and 2030. Some of the provided contracts have already expired and are assumed to be renegotiated and/or extended with the same service provider. Contracts range in duration anywhere from 1 year to 15 years, with 5 being the most typical. Many of the contracts have built in extension and renewal options if both parties come to mutual agreement.

Contract Costs

Contract costs for waste disposal agreements are primarily driven by tip fees. Tip fees for MSW are variable between contracts and tend to escalate through the years of the contract. Current MSW disposal rates range from $85/ton to $110/ton escalating to between $90/ton to $120/ton in the coming years. These are general rates, however, and are not consistent across municipalities or contract service providers. Tip fee escalation rates are also inconsistent across municipalities and service providers. Many contracts don't include bulky waste disposal, but those that do charge relatively similar rates to slightly higher rates for bulky waste as compared to MSW. Many of the contracts do include recyclable material processing. Recyclable materials are processed either free of charge or for a relatively small fee (approximately $20/ton). Some contracts include a variable recyclable material tip fee that may result in a rebate to the municipality depending on the current state of the recycling market. Many contracts also include caveats and fees for contaminated loads, which will be discussed further in the subsequent sections. Service providers typically invoice the municipality at the end of each month for the material disposed.

Additional Contract Components

Hauling procedures also vary between contracts. Some contracts include hauling to the servicers processing facilities whereas other contracts define that responsibility to the municipality. The provided MRR contracts include the latter, where it is the municipality's responsibility to deliver material to the specified facilities. Like contracts with other service providers, the municipality may designate authorized haulers to deliver the materials to the specified facilities. Another scenario puts the hauling responsibility solely on the service provider. As described above, the agreement between Somers Sanitation and the town of Windsor includes hauling. The contract between the town of Andover and WPP also includes hauling, where WPP will haul material from Andover's transfer facility at a rate of approximately $200/load (increasing annually). Contracts that include hauling also typically include roll-off container and compactor rentals for the town's use. The contract between WPP and to town of Hebron does not include a hauling option. For contracts that require delivery, specific rules and procedures for delivery of material are laid out in the contract or contract attachments. The specified rules and procedures are typically delivery facility specific, but ultimately include similar information.

Destination Facilities

The MRR contracts specifically lay out some of the ultimate disposal locations for the waste they accept from the municipalities that they have contracts with. In the contracts, MRR states that they will make an effort to utilize waste to energy facilities, as opposed to landfills, for the ultimate

disposal location for the material they accept. This effort is consistent with the Connecticut General Statutes 22a-228 and 22a-229[12]. The following table outlines facilities that are noted as the ultimate disposal facilities that MRR may utilize:

Table 6: Destination Facilities

Facility Name	Address
Mid-Connecticut Resource Recovery Facility[1]	Reserve Road, Gate 20 Hartford, CT 06114
Wheelabrator Millbury	331 SW Cutoff Road Millbury, MA 01607
Wheelabrator Bridgeport	6 Howard Avenue Bridgeport, CT 06605
Wheelabrator Lisbon	425 S. Burnham Highway Lisbon, CT 06351
Covanta SECONN	132 Military Highway Preston, CT 06335
CEP Springfield[1]	188M St. Agawam, MA 01001
CEP Pittsfield[1]	500 Hubbard Avenue Pittsfield, MA 01201
Carbon Limestone Landfill	8100 S. Stateline Road Lowellville, OH 44436
Apex Landfill	11 County Road 78 Amsterdam, OH 43903
Sunny Farms Landfill	12500 W. County Road 18 Fostoria, OH 44830
Tunnel Hill Landfill	8822 Tunnel Hill Road New Lexington, OH 43764

Table Notes:

(1) – Facility not included in most recent contract.

[12] https://www.cga.ct.gov/current/pub/chap_446d.htm#sec_22a-228

Collection Contracts

As stated previously, three municipalities provided waste collection contracts: Manchester, South Windsor, and Windsor. Manchester and South Windsor are serviced by All American Waste, LLC and Windsor is serviced by Windsor Sanitation, Inc. The table below outlines the collection services described in the contracts for each municipality.

Table 7: Collection Contracts

Municipality	Contract Servicer	Services Provided
Manchester	All American Waste, LLC	• Weekly refuse collection • Bi-weekly recycling collection • Weekly yard and leaf waste collection • Scheduled bulky waste collection
South Windsor	All American Waste, LLC	• Weekly refuse collection • Bi-weekly recycling collection • Monthly bulky waste collection • Scheduled metal collection • Annual Christmas Tree collection
Windsor	Windsor Sanitation, Inc.	• Bi-weekly recycling collection

Service providers provide collection carts to residents at flat rate fees provided in the contract. Contract costs are calculated based on material type and per dwelling collection fees. Costs are calculated on an annual basis and are typically paid in monthly installments. See the table below that outlines the contract cost breakout for the municipality of Manchester.

Table 8: Contract Costs for Manchester

Service	Monthly Cost Per Dwelling
Weekly refuse collection	$6.346
Bi-weekly recycling collection	$3.314
Weekly yard and leaf waste collection	$0.834
Scheduled bulky waste collection	$1.029
TOTAL	**$11.523**

Table Notes:

- *Costs from a letter, Re: Residential Curbside Waste Collection Services, dated August 11, 2022 for the contract cost adjustments for the fiscal year July 1, 2022 through June 30, 2023.*
- *Contract assumes 16,471 dwelling units, resulting in an annual contract cost of $2,277,544.00.*

Waste Diversion Continuous Improvement

Methodology

As part of this task, the Project Team conducted an analysis of and is presenting research on strategies that will help CRCOG's member communities increase solid waste diversion in the next five years. These strategies include growing residential curbside organics collection and commercial organics collection, implementing variable rate pricing for trash disposal (pay-as-you-throw), and increased recycling outreach and technical assistance.

The Project Team researched each strategy, received information from several of the CRCOG communities, utilized information from the focus group meeting that occurred on September 13, 2022, and used its extensive knowledge and many years of experience to recommend these strategies.

Residential Organics Collection

Residential food waste collection is a key area that CRCOG communities need to build out in order to reach CT's 60 percent diversion goal. Limited residential food waste programs exist in the CRCOG region, though many communities are looking into starting one or expanding existing pilot programs. The CRCOG region already has robust leaf-collection programs and adding food waste to the list of accepted materials for composting, or collecting food waste separately for biogas production, represents a huge opportunity to move the region toward the state's diversion goal – while reducing GHG emissions and reducing the reliance on the limited disposal options the CT currently has.

PROJECTED BENEFITS

In 2015, CT's waste characterization report showed residential food waste made up 20 percent (272,656 tons) of CT's overall residential waste stream, which was up from the 2010 report showing food waste at 13.7 percent (183,112 tons). Utilizing CRCOG's disposal data and the state's residential waste characterization report, the project team would anticipate approximately 111,784.6 tons of food waste in the CRCOG residential waste stream.

With disposal rates of $90 to $120 per ton projected in the next five years, this represents a spend of approximately $10M to $13.5M, along with the costs to collect and transfer which can reach $200 to $250 per ton – representing another $22M to $28M in annual spend for handling the organics portion of CRCOG's residential waste stream. Redeploying this spend into the residential curbside organics collection is the underlying business case for expanded services, along with the associated environmental benefits and reductions in capital spend for the traditional disposal infrastructure.

DECISION POINTS

Residential wasted food recycling can be implemented following several different best practice models briefly described below. Each community will need to evaluate which of these are the best fit for their residents and their service approach. That said, CRCOG can play a role by helping its members understand these different approaches and which might be the best fit for the larger service region.

Community drop-off programs – Some CRCOG communities currently have community food waste drop off programs and others are looking at the potential to develop community drop-off sites for food waste. Drop-off sites can be a relatively low-cost way to begin collecting food waste while easing into a community wide curbside program. Community drop-offs can also work well to divert food waste in higher density areas with a large percentage of multi-family residences where access to organics collection can be difficult and limited. Depending on how the program is designed, a range of facilities to process food waste collected through drop off programs can be utilized. While community drop off programs can receive significant lbs. per household from each visit, the number of participating households tends to be lower, resulting in lower tons of food waste collected through drop off programs compared to when it is collected curbside.

An example of a city with a successful food waste drop off program is Washington, DC which has three year round and seven seasonal staffed food waste drop off sites which are collocated with farmer's markets. In FY 2021, the program collected 413 tons of food waste, or the equivalent of 0.05 lbs. per household per week. It averages 6.9 lbs. of food waste collected per participant drop at the site. The cost of the program in FY 2021 was approximately $375k or approximately $908/ton. One benefit of a staffed drop off program is outreach and education. Staff at the drop off sites interacted with 125k visitors in FY 21. Participation and therefore tons of food waste collected correlates with the foot traffic or popularity of the farmer's market where the food waste drop off station is sited. Blue Earth is a vendor local to the CRCOG region that provides services for food waste drop off programs including cart delivery, collection, hauling, processing and cart cleaning.

Source-separated organics – Collecting food waste and yard waste separate from trash and recycling is an option for organics recycling that many communities across the country have implemented. One factor that can influence the decision of how to implement organics collection is that separate organics collection requires additional infrastructure. Communities will need to invest in systems that support an additional cart/container and additional truck routes and collection trucks. Additionally, in any organics recycling program, the hauler/facility and community will need to decide what materials to accept for composting or AD.

Anaerobic digestion facilities with existing built capacity to accept some source separated food waste currently is available in the region and a number of communities are planning pilots for curbside collection of food waste separate from yard waste.

Another model that warrants further exploration is commingling residential food and yard waste for curbside collection. For communities that already have or plan to add curbside yard waste collection, this reduces the cost of adding another curbside collection for food waste, greatly reducing the costs per household for the service. Commingled food and yard waste is best processed at a composting facility as opposed to an anaerobic digestion facility. While WeCare's Ellington Facility currently only accepts yard waste; it has space to expand and to be upgraded to

handle commingled food and yard waste. Additionally, local communities could work together to develop a composting facility specifically to process residential commingled food and yard waste.

Determining the amount of additional yard waste that could be collected would require additional modelling based on local climate factors and data on existing yard waste collection programs in place. Curbside food waste collection per participating household is anticipated to be similar across program types with the primary difference being that greater participation is participation through the convenience of curbside collection compared to drop off programs.

Seattle's FY 22 rates for weekly collection of commingled food and yard waste weekly from single family homes was $7-$13.40 per household depending on the cart size selected, with additional fees for additional bags of organics. In 2019, Seattle collected 17 lbs. per week per single family household and 0.8 lbs. per week per multifamily household.

In 2021-2022, Montgomery County, MD conducted a one year pilot collecting food waste only (yard waste not collected with food waste) from single family homes. Households were required to enroll in the pilot to participate. By the last month of the pilot, 25% of households had enrolled. 7.75 lbs. per household was the average amount of food waste collected per enrolled household.

Co-collection (source separated food waste and trash) – Collecting source separated food waste in the same cart and truck as collecting trash (co-collection) is an option for communities looking to decrease both the cost and the emissions associated with separate organics collection. Co-collection typically entails a community utilizing special-colored bags in carts to denote both trash and organics, then the material is taken to a facility and separated by color. The material is then processed into either nutrient-waste compost or into biogas at an anaerobic digester.

In early 2022, the City of Meriden, CT launched a four-month residential food scrap co-collection pilot program called "Making Meriden Green". [13] The voluntary pilot was funded through a DEEP $40,000 grant, which covered purchasing the color-coded bags and shipping the food scraps from Meriden to its project partner Quantum Biopower in Southington, CT. When the pilot concluded, Meriden officials estimate they collected about 13 tons of food scraps throughout the four months, which they estimate was about 24 percent of the available food scraps. Approximately 3 lbs. per participating household per week was collected from participating households; however, 44% of households did not participate. If adjusted to include all households, this is approximately 1.6 lbs. per household. One key lesson learned is that manual separation of bags containing food waste from bags containing trash on the tip floor is not viable at scale and that automated processing would be needed.

FIVE YEAR IMPLEMENTATION PLAN

As the CRCOG communities make decisions on how to move forward there are approaches to implementing residential curbside organics collection through collaboration program design and procurement that can provide a foundation for achieving economies of scale in launching effective

[13] https://www.ctpublic.org/2022-06-23/meriden-pilot-project-shows-promising-results-as-connecticut-finds-ways-to-recycle-food-waste

programs based on one or more of the following models. The following multi-phase approach provides a roadmap for implementation of residential curbside organics collection programs that can contribute towards waste diversion goals over the next five years.

PHASE 1: Service Provider Inventory and Program Design/Planning (Next 6 months)

- Form residential curbside organics collection program (RCOC) Implementation Committee
- Identify, interview and prepare summary profiles of existing and potential service providers – local examples include We Care Denali, and regional/national examples include Atlas Organics.
- Profile residential curbside organics collection program service opportunity – detailing the list of potential communities and their relevant information (HH counts, existing service approach and providers, expected contracting mechanism, related details) as well as information on the types of collection services under consideration.
- Develop one or more options for procurement approach (e.g. bundled community procurement and contracting package, bundled procurement with individual contracting, template for individual communities to undertake their own procurement, etc.) – including proposed procurement timeline, key milestones and steps. +
- Review above with RCOC Implementation Committee and develop a recommended service package, procurement approach, timeline and steps for required approvals to move forward.

PHASE 2: Decision making and program procurement (months 7 through 15)

- Work with RCOC Implementation Committee to secure expressions of interest from potential participating communities (e.g. resolutions, administrator letter, etc.) and finalize description of services and updated procurement approach and timeline.
- Prepare procurement package for implementation or as template package for communities to release (specifications, request for qualifications RFQ or expressions of interest RFEI or full request for proposal RFP).
- Undertake full procurement process either as bundled approach overseen by the RCOC Implementation Committee or as individual communities with facilitation support by same.
- Vendor selection, approvals, contracting and notice(s) to proceed.

PHASE 3: Program implementation and operation (months 16 and ongoing).

- Began communicating to residents that the program is coming
- Solidify messaging and design educational materials
- Work with selected vendors in program implementation steps
- Launch services and programming with selected vendors
- Monitoring, reporting, evaluating and continuous improvement

Commercial Organics

Commercials businesses are large generators of organic waste and implementing and enforcing commercial organics programs and policies can help the CRCOG region move the needle toward its diversion goals. Businesses, such as bars and restaurants, produce organic food and packaging waste in both the back of house (prep and kitchen area) and the front of house (dining areas). Additionally, some businesses and commercial entities produce organic waste that is not comprised of food scraps but might be larger in volume. For example, a business might clear land or update its landscaping, resulting in a large amount of organic material that can be feedstock for composting or AD.

As noted in Task 1, Connecticut has mandatory organics legislation that requires certain commercial generators to source separate organic materials and ensure they are recycled at an authorized organic material composting facility that has available capacity. However, based on the tonnages reported to DEEP, many commercial entities that should be separating organic waste are not currently doing so. The legislation was recently enacted (2022) but is not yet widely adopted and enforced, posing a large gap in unrecovered material.

BENEFITS, DECISION POINTS AND FIVE YEAR IMPLEMENTATION PLAN

There are only a few potential mechanisms for CRCOG communities to accelerate adoption of organics collection systems by the commercial sector. As stated above, there is already a state-wide regulatory framework that establishes the foundation for commercial organics collection, yet local uptake and engagement appears to be severely lagging. And increasing interest by the commercial food service industry in zero waste and sustainable operations makes these efforts very timely.

The available mechanisms largely rely on the ability of local units of government to a) further reinforce the existing state regulatory framework to increase the overall adoption of commercial organics collection practices, and b) take steps to establish a pool of credible service providers for these services.

Towards those ends CRCOG communities could adopt local ordinances reinforcing the state's commercial organics collection requirements by clarifying and potentially expanding the range of specific commercial enterprises covered, further specifying the operational activities that are needed at the local enterprise level to demonstrate compliance and institute the types of reporting that would enable documentation of success – possibly in collaboration with the state. In structuring local ordinance language legal counsel would take steps to show "hand in glove" consistency between state and local coverage to assure the overall legal integrity of these steps. Ideally CRCOG communities would adopt a consistent approach across the CRCOG region for maximum impact.

Concurrently, CRCOG communities could take steps to establish a pool of credible service providers for these services by a) taking proposals from private service providers who are ready to develop and/or expand the availability of commercial organics collection services in the region and b) facilitate, with both technical assistance and appropriate commercial organics non-exclusive hauler licensing at the local level (integrated with the above mentioned ordinances) to ramp up the supply of credible service providers while the demand for those services is growing.

The following multi-phase approach provides a roadmap for implementation of commercial organics collection that can contribute towards waste diversion goals over the next five years.

PHASE 1: Service Provider Inventory and Program Design/Planning (Next 6 months)

- Form commercial local organics collection program (CLOC) Implementation Committee
- Identify, interview and prepare summary profiles of existing and potential service providers – local examples include We Care Denali, and regional/national examples include Atlas Organics.
- Profile commercial organics collection program service opportunity – detailing the list of potential communities and their relevant commercial organics generation sites as well as information on the types of collection services under consideration.
- Develop one or more options for implementation approach (e.g. bundled community development vs individual community action with templates provided by CRCOG – including proposed implementation timelines, key milestones and steps. +
- Review above with CLOC Implementation Committee and develop a recommended service package, timeline and steps for required approvals to move forward.

PHASE 2: Decision making and program development (months 7 through 15)

- Work with CCOC Implementation Committee to secure expressions of interest from potential participating communities (e.g. resolutions, administrator letter, etc.) and finalize description of services and updated implementation approach and timeline.
- Prepare implementation package for execution or as template package for communities to execute (draft ordinance language, technical assistance package, non-exclusive licensing platform, recruitment and technical assistance package, etc.
- Undertake full implementation process either as bundled approach overseen by the CLOC Implementation Committee or as individual communities with facilitation support by same.
- Adoption of ordinances and initiation of commercial organics licensing process.

PHASE 3: Program implementation and operation (months 16 and ongoing).

- Began communicating to commercial organics generators that the program is coming
- Solidify messaging and design educational and technical assistance materials
- Work with licensed service providers to finalize their program/service launch plans
- Launch services and programming with selected vendors
- Monitoring, reporting, evaluating and continuous improvement

Pay-As-You-Throw (Unit-Based Pricing)

Pay-As-You-Throw (PAYT), also known as variable rate pricing or unit-based pricing, is a mechanism communities can use to encourage residents to recycle more and minimize the amount of trash they produce. Like many other utilities residents pay, such as gas, electricity, and water, PAYT programs allow residents to pay for their trash service based on how much they throw away. This kind of system provides an economic incentive for people to be mindful about what and how much they consume, and PAYT programs often lead to higher recycling rates and lower amounts of material going to landfills or incineration.

With the shutdown of the MIRA facility, CRCOG communities have virtually no disposal capacity within 100 miles of the region, and implementing PAYT programs can help communities keep disposal costs lower by diverting more material to the recycling and organics stream rather than seeking more expensive and complicated disposal options. Both recycling and organics capacity are well-poised for continued growth in the region, and the opportunity is ripe, as the volume of recyclables collected from households in the region is below the national average for single family homes and approximately 170 pounds lower than high performing diversion programs for single family homes.

There are a few different ways to implement and execute PAYT programs. Note that PAYT can also be referred to as variable rate pricing, unit-based pricing, or SMART (Save Money And Reduce Trash). When considering a PAYT program, many decisions will need to be made (see phase 2 of the implementation plan), and one of the best parts about PAYT is that it can be flexible to fit the needs and budget of each individual community. The summary below explains the benefits and drawbacks of the most common types of variable rate pricing programs: carts, bags, and stickers/tags.

Carts:
Cart-based PAYT programs work best with curbside collection systems, as many communities are already set up for picking up curbside trash and recycling. In a cart- or container-based program, households can choose the size of their trash container based on the volume of trash they anticipate their household producing. The smallest cart option is the cheapest, and the largest (often a 96-gallon container) or extra trash carts are the most costly. Cart or containers can either be purchased by the community, by the hauler, or by the resident.

- **Pros:** Integrates well with existing semi- or fully automated curbside programs, more effective at keeping vermin and wildlife out of the trash, predictable and stable revenues, convenient for residents, lower staffing requirements in full automated systems
- **Cons:** Initially costly if new carts must be purchased, residents are charged for unused volume in the smallest cart, community must pay to store extra carts

Bags Only or Bags in Carts:
Pay-as-you-throw systems can utilize bags instead of carts or containers to collect trash in. These bags are specific to the community's program and often come in two different sizes (though some communities may have more than two sizes). Residents can purchase bags at retail locations or other designated spots, then they must use these bags to dispose of their garbage at the curb on their designated trash day. Residents pay for the bags individually – this is technically their trash

fee – but some communities may charge a separate monthly fee for recycling. Another option that can mitigate some of the cons listed below is when a community implements a PAYT system using bags but also provides a trash container or requires the homeowner to purchase a trash container to house the bags when setting their trash out on the curb for collection. Residents still pay for only the trash they are producing through the purchase of bags, but this method keeps vermin and wildlife safe and can help lessen potential injuries to collection staff caused by bags breaking or being too heavy to safely lift.

- **Pros**: Residents pay for only what they use, ease and speed of collection (don't have to return a cart to the curb), can be used to complement cart programs for extra garbage, can lead to higher diversion, easy for residents to store
- **Cons**: Inconvenient – must get them from a store, higher vermin/wildlife potential, can be hard to handle and move, higher chance of injuries for workers, revenues can be uncertain and may vary, can cause litter if bags break

Sticker/tags:

Similar to bag based PAYT programs, stickers or tags are purchased by residents and affixed to trash bags (of any sort) to communicate that the bag has been "paid" for.

- **Pros:** Easy to store, residents pay for only what they use, flexible with many size and shape choices for residents
- **Cons:** Inconvenient – residents must buy bags and tags from a store, higher vermin/wildlife potential, can cause litter if bags break, higher chance of injuries for workers, revenues can be uncertain and may vary, can fall off or peel from bags, higher counterfeit/reproduction risk

Multi-Family PAYT Programs:

PAYT can be implemented at multi-family (MF) properties to help increase recycling rates and decrease the amount of trash sent to landfills, although MF PAYT programs pose specific challenges in a sector of recycling that already has its difficulties. A few strategies are listed below. It is worth noting that all these strategies must be paired with strong and comprehensive educational campaigns to decrease contamination in the recycling stream.

- **Variable-size trash dumpsters paired with recycling:** With this strategy, a city or town can incentivize MF property owners to take more ownership over the quality and quantity of their residents' recycling stream by requiring haulers to implement rate structures for trash dumpsters based on the number of MF units. However, this strategy puts the incentive entirely in the hands of the property owner/manager to then pass along to the residents, since most MF properties do not have the means to track how much trash residents are producing and bringing to the dumpsters. This strategy can also lead to increased recycling contamination, as residents might just throw trash in the recycling dumpster when the smaller trash dumpster is full.

- **Paid bags:** A MF property can incentivize its residents to produce less trash by requiring its residents to pay for a certain fee for a specific number of trash bags (two per week, for example), and residents would have to pay for any additional trash bags they require. This strategy does require more of a "valet" trash pickup service vs. just traditional bags in dumpsters.
- **Technology solutions:** Although newer in its development, solid waste specific technology can provide future solutions for more complicated PAYT programs, like MF. A company called CLYNK is currently using technology to collect redemption material in bottle bill states. A resident signs up for an account, fills a designated bag with redeemable material, prints a unique bag tag and barcode, and drops the filled bag off at a participating kiosk. Although this does not yet apply to PAYT for MF residents, it shows that there may be an opportunity for the MF recycling space to evolve to accommodate a PAYT tracking system. This would require pilot programs and extensive investment. Another option that utilizes state-of-the-art technology to administer PAYT programs is explored in the case study below.

MULTI-FAMILY PAYT CASE STUDY: Parma, Italy (96,000 HHs)[15]

Parma, Italy introduced a PAYT scheme that used a variety of technological advances, including bags or bins equipped with RFID tags, 24/7 eco-stations, and a smartphone app that would not only provide information about the services but also provided information like recipes to help reduce food waste. Waste was collected door-to-door on a set schedule, and the less waste the resident generated, the less they would pay. Additionally, residents that brought their waste to the eco-stations were rewarded with a points system that allowed them to further reduce their waste bill. In 2018, the municipality achieved a 65% drop in residual waste generation and saved up to 3.5 million euros in incineration costs.

Examples of PAYT programs in CRCOG region:

Mansfield's PAYT program: Mansfield is one city in the CRCOG region that implements pay-as-you-throw programming, as adopted in the 1990 Mansfield Solid Waste Ordinance. The smallest container for trash that a resident can select is a 20-gallon can, which runs $16/month or $48/quarter. The largest option is a 160-gallon can, which costs $56/month or $168/quarter. If residents produce more trash than fits in their can, there is the option to buy extra bag tags at $4 per tag for a 30-35 gallon bag of trash (or for every 50 square feet of material for oversized trash like carpet, padding and futons). Residents also receive a 64-gallon container for recycling and if they produce more recyclables, additional recycling containers are available for $6.20/month. Both trash and recycling are picked up once per week. Most households use the 35-gallon or 64-gallon cart (37% and 30%, respectively), with only 9% of households using 96 and 160-gallon containers for trash. These are mainly college students living together in a shared rental house and producing more trash than a typical family. As a result of implementing PAYT, Mansfield residents generate 614 pounds of trash per capita annually, compared to average of 949 pounds for CRCOG residents and 1,095 pounds for the country.

[15] http://www.residusmunicipals.cat/uploads/activitats/docs/20210304114507.pdf

Coventry's PAYT program: Coventry also has implemented a pay-as-you-throw program. The smallest option is a 35-gallon cart, which costs the resident $195/year, or $16.25/month. The largest option is a 95-gallon cart, which costs $275/year, or roughly $23/month. Residents are provided a 95-gallon cart for recycling. If residents produce trash or recycling more than their cart size, a small trash dumpster and a small, comingled recycling dumpster are available. To use the trash dumpster, residents must pay $1 for each bag, limited to six bags per resident per week; use of the recycling dumpster is free.

Examples of PAYT programs in MA

Nearby in Massachusetts, a campaign to encourage municipal adoption of PAYT Programs has demonstrated the success of this approach across a wide variety of sizes and types of municipalities. Their latest 2022 program summary shows PAYT adoption in 154 communities with nearly 2M in population and 770,000 households. These range in size from small communities of 500 to 5,000 households, to communities with populations over 150,000.

Worcester PAYT program: The municipality of Worcester serves 67,000 households with a modified container/bag PAYT system that is funded by a combination of taxes and PAYT fees. Types of housing covered include buildings with up to 6 units per structure, as well as condo and apartment complexes. The residential unit must use pre-purchased waste bags for their trash with progressively higher rate structure – the smallest bag (15 gallons) priced at $ .75 per bag and the larger bag (30 gallons) priced at $1.50 per bag. In their 2021 report on program performance, Worcester indicated no problems with illegal dumping.

City of Chicopee PAYT Program. Chicopee, with its 18,872 households + 160 small businesses also uses a combination of tax revenue and PAYT fees as part of its PAYT approach. The City provides weekly automated curbside collection of trash in 35-gallon carts and yellow "overflow" PAYT trash bags; every other week curbside collection of single-stream recycling in 95-gallon carts; every other week collection of yard waste in 32-gallon barrels or paper bags. Chicopee municipal crews provide collection services, and the program is funded by a tax levy along with the PAYT fees. Documented performance since the program was initiated in 2017 showed a 12.7% increase in recycling tonnage and 17.4% decrease in trash tonnage compared to the previous two years before the program started. The City of Chicopee saved more than $113,000 in disposal costs over those two years.

Regional implementation of PAYT:

If the CRCOG wanted to support regional implementation of PAYT programs with CRCOG communities, there are a couple of different options to consider. One option is to build a technical assistance program that would provide implementation planning and support to CRCOG communities interested in transitioning to PAYT. Through a program like this, CRCOG could provide one-on-one support, templates of sample agreements or contracts, minimum standards of success, and other tools that would help communities streamline PAYT implementation and manage more efficient programs. CRCOG could phase in the communities transitioning to PAYT over a few years, potentially working with DEEP to provide financial incentives for the first round of communities working on implementation. Another way CRCOG could encourage regional adoption of PAYT is by encouraging and guiding communities as part of an RFP process to include requirements for haulers to provide PAYT service for collection. CRCOG could help put together template criteria for selecting a hauler, with points awarded for how well the hauler's PAYT program is conveyed in the proposal,

and CRCOG could provide communities and haulers with technical assistance in negotiating an efficient and effective agreement.

A variation on the above would be adoption, through local ordinance, a requirement that all haulers providing services to municipalities must provide some type of PAYT structure in their service offerings. This could be coordinated with the regional implementation of PAYT steps outlined above, either through technical assistance or an RFP process or both.

PROJECTED BENEFITS AND DECISION POINTS

PAYT programs can incentivize behaviors that lead to less trash produced and disposed: increased recycling, smarter purchasing choices, decreased consumption, increased reuse and donation, and more composting. PAYT programs can also help achieve increased social equity and fairness, since households that produce less waste are no longer subsidizing the cost of handling high-waste producers and instead are paying for only the level of service they need. However, PAYT programs can also be interpreted as a burden to low-income residents and other vulnerable populations if their trash bill increases after implementing a PAYT program, but communities can help mitigate this issue by providing discounted or free bags to their most vulnerable residents. Additionally, depending on how solid waste has been paid for in the community, switching to variable rate pricing can be perceived as an "additional" fee, since the cost of trash is now visible to the resident, even though they had been paying for the service all along, through either a flat fee or through taxes. Because of this perception, political support for PAYT programs can be hard to achieve, and decision makers often do not want to fix a system that is not necessarily broken. To mitigate the "additional" fee challenge, a community can implement a PAYT program that is "revenue neutral", reducing fees/taxes by the equivalent spend expected through implementation of a PAYT program. Communicating the positive benefits of variable rate pricing, as well as success stories from other communities, can help move a program forward.

PROJECTED COSTS/SAVINGS

Research shows that PAYT can result in a substantial reduction in waste – up to 45 percent in some cases – but for the purposes of this report, the Project Team used a conservative 20 percent reduction in waste generated. According to 2019 waste generation figures, if the CRCOG region was able to reduce its waste by 20 percent because of unit-based pricing, an additional 111,784 tons of material would be kept out of regional landfills and waste-to-energy plants. In addition to saving landfill space, PAYT programs can help local governments cover the costs of what trash does need to be disposed. Traditionally, solid waste programs are funded either through taxes or through a solid waste user fee where residents are charged a flat fee for trash collection and disposal, regardless of how much or little they produce. PAYT programs can help communities save money by reducing the number of tons sent to disposal, which is particularly important in the Northeast, a region that has the second highest landfill tipping fees in the country at an average of $69.64 per ton (EREF, 2021). Using this data, the CRCOG region could potentially save upwards of $7.5 million annually with a 20 percent reduction in waste.

According to a case study put together by DEEP, Stonington, CT implemented a PAYT program in 1992 and has avoided $7 million in disposal costs since the program began. Their unit-based fees cover approximately 98 percent of its solid waste program, and its recycling rate has risen to 40 percent, from 27 percent, as a result of the program.

FIVE PHASE IMPLEMENTATION PLAN

PHASE 1: Research and stakeholder engagement (18+ months prior to implementation)

- Form committee made up of city council members, residents, community leaders, and waste haulers
- Brief upper management and elected officials
- Conduct focus groups and analyze major pain points that might come up during initial public discussions
- Research PAYT programs in cities of similar sizes and monitor planned pilots (Rocky Hill)
- Arrange meetings with other cities to learn from their experience implementing PAYT
- Determine if recycling and/or composting programs have additional needs to support PAYT
- Develop/refine implementation plan and timeline

PHASE 2: Decision making and program planning (12 to 18 months prior to implementation; this phase can be concurrent with Phase 1 and Phase 3 if community is ready to proceed)

- Determine if the community needs to pass an ordinance to implement PAYT and research sample ordinances
- Based on your community's needs and abilities, choose a container option and sizing
- Issue RFP for container/bag/sticker manufacturer
- If bags or stickers are used, begin conversations with potential retail partners
- Determine a pricing structure
- Discuss billing and payment systems
- Decide if conducting a pilot first before fully rolling out a PAYT program makes the most sense for the community

PHASE 3: Develop an education and outreach plan (9 months prior to implementation; this phase can be concurrent with Phase 1 and Phase 2 if community is ready to proceed)

- Began communicating to residents that the program is coming
- Solidify messaging and design educational materials
- Hire additional staff if needed and develop training procedures for staff
- Include mitigation strategies for potential issues (increased contamination, illegal dumping, equity, noncompliance)
- Create and finalize enforcement procedures

PHASE 4: Rollout and implementation (3 months prior to implementation to 6 months following implementation)

- Receive and process requests for assistance from vulnerable populations
- Distribute containers to residents and/or distribute bags/stickers to retailers
- Distribute educational materials and begin inspections, with warnings given during the first six months
- Enact or expand programs to mitigate negative effects of implementation (illegal dumping, litter, etc.)

PHASE 5: Continued evaluation, monitoring, and program refinement (ongoing)

- Replace lost, stolen, or broken containers as needed
- Modify unit pricing, if necessary
- Monitor container and/or bag/sticker inventory
- Continue enforcement of the program
- Continue to collect trash, recycling and/or composting data
- Communicate the successes of the program to decision makers and residents
- Create and disseminate new educational materials as needed

Recycling Outreach, Technical Assistance and Performance

The opportunity for CRCOG to provide recycling outreach and technical assistance to its jurisdictions is huge. As a regional entity, CRCOG is uniquely positioned to work with its 38 member towns to provide educational and outreach resources to increase both the quantity and quality of materials diverted in the region. Because individual behavior change requires continual, consistent education, CRCOG has the ability to provide regional resources instead of each community developing piecemeal collateral. A resident may live in one community and work in another, and the more familiarity they have with a recycling program, the more likely they are to make the choice to recycle and to recycle correctly. The 2016 Comprehensive Materials Management Strategy, developed for DEEP, listed "increased standardization of recycling collection across the state" as a recommendation it heard from key stakeholders. CRCOG could also work with other COGs throughout the state to either improve the resources offered through and awareness of the recycleCT.com site or to develop new outreach material that could be used throughout the COG region and beyond.

CRCOG is also positioned to provide technical assistance throughout the region to communities interested in improving their waste diversion programs. This work can be done through workshops, trainings, studies, site visits and other practices that will help CRCOG's member communities improve the services provided to residents.

CASE STUDY: Know What to Throw Campaign – North Texas[16]

In 2019, the North Central Texas Council of Governments (NCTCOG), which represents 16 counties and nearly 8 million people in north Texas, launched a regional educational campaign called "Know What to Throw". The campaign was funded by a solid waste grant through the state's regulatory agency, the Texas Commission on Environmental Quality. The goal of the campaign was to create coordinated messaging to improve recycling across the region served by NCTCOG. One of the coordinated messages, for example, was focused on the top four items to keep out of the recycling stream. These items were identified through both stakeholder conversations and regional waste audits and included plastic bags, tanglers, food, and batteries. The NCTCOG built out a "Know What to Throw" website that contained toolkits, customizable templates, messaging timelines, blog content, social media content, and more resources that were free to use by NCTCOG municipalities. Additionally, the NCTCOG underwent a large regional marketing effort (in both English and Spanish)

[16] https://www.nctcog.org/envir/materials-management/regional-recycling-survey-and-campaign

that included newspaper ads, bus/bus stop ads, digital posts, Google ads, and more. Through this marketing effort, the campaign website, timetorecycle.com, saw nearly 30,000 new users from June 1, 2019 to July 25, 2019, with the majority driven to the website by paid searches and display ads in local newspapers.

PROJECTED BENEFITS

As noted in the system assessment conducted as part of Task 1 of this project, opportunities are large for CRCOG to improve education, outreach, and technical assistance. Many CRCOG jurisdictions noted that it can be hard to budget for a specific recycling coordinator or outreach specialist position, and CRCOG can help fill some of these gaps with a comprehensive outreach and technical assistance program.

DECISION POINTS

CRCOG is uniquely positioned to facilitate conversations about the needs of its region and bring that information to the state. One decision CRCOG will need to consider is what level of advocacy it is comfortable engaging in. For example, as noted in Task 1 of this project, many communities are hoping to support extended producer responsibility (EPR) as a state policy tool to fund local materials management programs. CRCOG can take a bigger role advocating for policies like EPR that will help divert more material from the waste stream.

Possible Role for CRCOG

The shut-down of MIRA and its facilities creates a service and leadership gap that CRCOG should consider taking action to replace. An option for replacing the MIRA functionality at a regional level is activating a regional solid waste authority. To service this purpose, CRCOG could elevate The Central Connecticut Solid Waste Authority (CCSWA) as the entity to lead the member towns as a regional Solid Waste Authority. CCSWA currently has a contract with CRCOG for administrative support but at this time CCSWA is a non-active authority.

Initial steps to form CCSWA were taken in 2010 when CCSWA By-Laws were drafted and solid waste management options were presented to the CT DEEP SWM Advisory Committee in February 2010. At that time, CRCOG member towns Canton and Granby conducted a presentation on the formation of CCSWA as regional resource under CT Regional Authority Statute Sections 7-273aa to 7-273oo.[17]

Additionally, in January 2023, DEEP announced the availability of $1.5 million in state grant funding through the Sustainable Materials Management Grant Program to help municipalities and regional waste authorities evaluate interest and identify governance to form new or expand existing regional

[17] https://www.cga.ct.gov/current/pub/chap_103b.htm#sec_7-273aa

waste authorities and engage in planning activities for diversion programs and infrastructure development.[18]

Table 9: Regional Authority

Regional Authority	
Governance	• Representation from each member town with CCSWA executive board elected by the CCSWA membership. • Each town would become a member by adopting an identical ordinance to CCSWA articles of incorporation; with minimum of two towns passing the model ordinance. • Executive Committee elected and directed by membership and provides authority management and staffing. • Members required to by pay dues and fees.
Purpose	• Jointly manage solid waste disposal and recycling services on behalf of members. • Solid waste services procurement; cost sharing/savings.

Solid Waste Authorities in Other Jurisdictions

To show the capabilities that a regional solid waste authority could bring to CRCOG the following information on solid waste authorities in other jurisdictions has been compiled: Housatonic Resources Recovery Authority (HRRA) in CT and Counties of Green, Ulster and Sullivan (GUS) NY. Also included in the compilation is Hennepin County, MN as a large county with solid waste strategies for member municipalities to adopt.

Housatonic Resources Recovery Authority (HRRA) CT

Results from a 1985 study conducted by the Housatonic Valley Council of Elected Officials (HVCEO) showed that municipalities would benefit by working together to solve

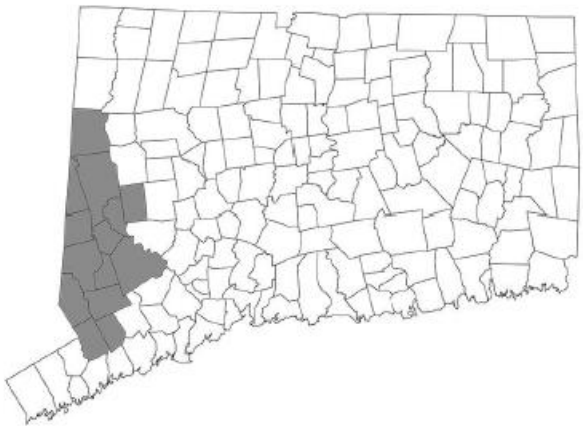
Housatonic Resources Recovery Authority

[18] https://portal.ct.gov/DEEP/Waste-Management-and-Disposal/Solid-Waste-Management-Plan/Comprehensive-Materials-Management-Strategy

regional solid waste disposal problems.[19] During this time, municipalities were under a state mandate requiring municipalities to *"make provisions for the disposal of solid waste generated within its borders".*[20] This was the main driver for the formation of HRRA - to provide long range solid waste management solution(s) for the Housatonic region.

Housatonic Resources Recovery Authority (HRRA) is a regional governmental waste management and recycling authority that serves fourteen (14) jurisdictions in western Connecticut.[21] The Housatonic Valley municipalities are Bethel, Bridgewater, Brookfield, Danbury, Kent, New Fairfield, New Milford, Newtown, Redding, Ridgefield, Roxbury, Sherman, Weston, and Wilton.

The Authority has 14 members and 14 alternates that make up the Authority but only 1 member from each town can vote; every town has two members: a municipal representative and an alternative. Full time staff includes an Executive Director and a Regional Recycling Coordinator with an office located at the Old Town Hall, Brookfield CT.



HRRA's authority and operating procedures are under CT State Statutes CGS 7-273aa -7-273oo. Concurrent ordinances and Authority bylaws were adopted by all member municipalities. Voting is proportional to the member municipality's population. The Authority oversees contractual obligations for solid waste and recycling services and currently manages the contract with Oak Ridge Waste & Recycling. Within the Authority, there are 12 residential drop-off sites and 5 transfer stations for use by private haulers.

The HRRA operating budget is funded by member MSW program fees, HHW municipal pass-through, hauler registration and permits, recycling program fees, and grants. Examples of user or program fees are presented below:

Table 10: Program Fee Examples

Member or Program Fees (Examples)
Fee Per Ton of MSW tipped at a HRRA-sponsored transfer station
Fee Per Ton of recyclables tipped at the Oak Ridge Transfer Station

[19] https://hrra.org/about

[20] CGS 22a-220(a)

[21] https://hrra.org

Recycling Program fee for recyclables
Hauler permit fee (per year)
Grants
Municipalities pay for the household hazardous waste (HHW) events according to number of residents participating per year

Benefits provided to members are summarized below:

Table 11: Member Benefits

HRRA's Services Provided to Members[22]
Manages hauler municipal registrations and permits, hauler insurance, and investigates complaints.
Provides CT DEEP with annual municipal recycling reporting; MSW/recycling tonnage.
Conducted public education/outreach and a public Q&A Hotline; manages website, public outreach materials/updates, and provides a residential hot line.
Oversees household hazardous waste (HHW) collections; Manages Regional Recycling Task Force.
Transfer Station Operators meetings, negotiate regional agreements.
Legislative issues; represent regional interests **and** writes grants.
Consult with members as requested; provides technical assistance.
Keeps current with state and national solid waste issues.

Greene, Ulster and Sullivan Counties (GUS), New York

In 2018 Tetra Tech conducted a feasibility study for the formation of GUS, a new multi-county solid waste authority between Greene County, Ulster County Resource Recovery Agency, and Sullivan County in New York. The results of the evaluation concluded that the formation of the GUS Solid Waste Authority was feasible.

Potential benefits with the formation of a new solid waste authority include more focused organizational, management and funding structures to execute the goals set forth for the authority.

[22]https://portal.ct.gov/DEEP/Waste-Management-and-Disposal/CCSMM/Full-Coalition-Meeting

The authority structure provides the ability to use all its combined resources on a larger scale to maximize best management practices that can result in cost sharing and/or new revenue generation for the operating unit. It was determined that existing MSW and recycling materials management programs in each of the three operating units were compatible. The existing facilities can manage these materials and are staffed by competent and capable employees. The infrastructure is capable of handling current and anticipated material throughput.

Recyclable material and material diversion is enhanced through coordinated efforts that are made possible with the formation of the regional solid waste authority. Operating costs varied among the three entities; therefore, overall operating expenses could be reduced through a combination of activities. Transportation and disposal costs for a combined entity should be able to be reduced to the lowest costs paid by any one of the entities. Moreover, further cost benefits should also be realized through greater volume to recycling markets and present the opportunity for material diversion projects.

Hennepin County, MN

Hennepin County, Minnesota has an estimated population of 1.26 million. The county seat is the City of Minneapolis. There are forty-five (45) jurisdictions in the county. The County has goals of recycling 75 percent of waste and sending zero waste to landfills by 2030.

Table 12: Hennepin County Towns

Hennepin County Towns/Cities (45)			
Bloomington	Golden Valley	Minneapolis	Rogers
Brooklyn Center	Greenfield	Minnetonka	Saint Anthony
Brooklyn Park	Greenwood	Minnetonka Beach	Saint Bonifacius
Champlin	Hopkins	Minnetonka Mills	Saint Louis Park
Corcoran	Independence	Minnetrista	Shorewood
Crystal	Lake Sarah	Mound	Spring Park
Crystal Bay	Long Lake	New Hope	Tonka Bay
Dayton	Loretto	Orono	Wayzata
Deephaven	Maple Grove	Osseo	Woodland
Eden Prairie	Maple Plain	Plymouth	
Edina	Medicine Lake	Richfield	

Excelsior	Medina	Robbinsdale	

In 2016, the County conducted an MSW sort to gain insight into what residents are discarding and to identify potential opportunities for recycling. Some of the key findings included:

- Reducing the amount of MSW generated is the most impactful waste management practice; there is considerable potential to improve waste prevention.
- Recycling organic materials presents the biggest opportunity.
- There are opportunities to improve recycling more paper and cardboard, and residents are confused about plastics recycling.
- Opportunities exist to improve recycling through curbside recycling programs, including clothing, plastic bags and film, electronics, mattresses, and scrap metal.

In January 2022, the County required all cities to offer organics recycling services to households with curbside recycling service. The county required each city to decide how to roll out the organics service, using curbside collection or a drop-off site, in addition to how to charge for organics collection. In some cities, organics recycling is voluntary for those who want to pay an additional fee.[23]

Conclusions and Recommendations

CRCOG is in a position to lead, coordinate, and provide guidance and insights to assist its member towns in their collaborative planning to divert valuable materials through organics processing, materials reuse/recycling, and incorporate regional sustainability objectives. Following is a list of steps that the CRCOG can pursue to advance collaboration and system resiliency within the region.

- CRCOG can serve as an over-arching governing entity by bringing together its 38 member towns to develop common goals for regional solid waste management and expanded materials diversion. Utilizing the 2016 Comprehensive Materials Management Strategy (CMMS): Statewide Solid Waste Management Plan as a basis for planning, CRCOG should establish a forum for consensus building and develop a future planning process for the towns to organize around a Diversion Collaborative and a solid waste management infrastructure designed to be resilient through enactment of waste diversion and recycling mandates.
- Without MIRA, CRCOG should activate CCSWA as the Solid Waste Authority to provide an overarching policy governing structure. As the state requires solid waste management infrastructure including WTE and organics management, in addition to recycling and reuse programs, CCSWA should be the conduit between state regulators and legislature to develop required infrastructure, operational arrangements and funding mechanisms.

[23] https://www.startribune.com/cities-take-alternative-routes-with-hennepin-countys-organics-recycling-mandate/600141619/

- CRCOG should consider taking an incremental approach toward working with its member towns, starting with 11-12 towns as early adopters of CCSWA and stronger diversion programming in the near term
- Using these tools and approaches CRCOG should facilitate the development of services and increased opportunities for organics, solid waste management and additional sustainable materials management options, and EPR, including infrastructure and operations to be developed over the longer term.
- All towns will require increased education and outreach and coordination as there is not a one-size fits all approach for MSW collection. As an example, Manchester does not use PAYT; CCSWA could facilitate the efforts of towns that want PAYT and consider working together to manage costs and administrative needs.
- Understanding materials and solid waste volumes will enable the CRCOG to better understand their position for negotiation of disposal contracts, along with all recyclable materials collected within the region. Together, the waste generated from multi-community agreements enables the potential for required infrastructure such as a regional organics management facility to be financially and environmentally viable.
- CRCOG should develop policies and action to support organics management and the state-wide Organics Diversion Law. CRCOG could consider a mandate and set goals to reduce MSW disposal through organics diversion; support future organics infrastructure development in member towns including Manchester and existing facilities including Quantum Biopower in Southington and the Hy-tone AD project in Coventry.
- Environmental Justice needs to be factored into the Regional Solid Waste Authority strategic planning efforts.
- CRCOG should seek funding/grant opportunities through Bipartisan Infrastructure Law.

Central Connecticut Solid Waste Authority (CCSWA) Level 1 and Level 2 Recommendations

The purpose of Task 2, Short-Term Disposal Strategies Evaluation, is to provide CRCOG with a recommended approach and timeline for CRCOG to start the pursuit as a Regional Solid Waste Authority utilizing the existing CCSWA foundation. In light of the potential support from the CMMS draft amendment, the CCROG should start to organize its members. An initial step for CCROG and its members is to establish the political will to work together and set a concurrent ordinance[24] for towns to adopt. Recommendations for staffing and budget, and potential resources needed for long-term sustainability will be identified with CCROG in Task 3.

Level 1 includes the administrative tasks for the implementation, start up and adaptation for CRCOG and its member towns to get started on the right track. These activities should include:

[24] Refer to HRRA's draft concurrent ordinance located in the Appendix.

- Education and outreach; conducting stakeholder meetings to put in place ordinances and membership responsibilities; updating the existing by-laws as necessary
- Establish a regional governance structure with each Town represented
- Providing grants and incentives, similar to how the MassDEP uses the ReTrac system for recording recycling gains for points, and those points lead to grant money for towns to spend on projects that benefit the community.[25]

These administrative tasks are best pursued over 1-5 years with additional time required to:

- Set up programs as needed. Focus on the low hanging fruit with early adopters and expand programs overtime (e.g., organics management).
- Manage contracts for those towns in need of procurement in the next 1-3 years.
- Administer town contracts for cost sharing and aggregation of materials to determine:
  - Expected service level, costs, and performance; contracts should be pooled if the provider is serving multiple towns.
  - Solution(s) should be designed for the next 1-5 years.
  - Identify associated benefits of contracts directly with the disposal facility.
  - Services structure should be pursued through an RFI.
- Establish Regional Waste Management Authority; operating procedures are under CT State Statutes CGS 7-273aa -7-273oo.
- Data tracking and providing information on trends in recyclable materials market to better understand the economic and environmental values of residents and commercial entities.
- Conducting waste characterizations: CRCOG needs to understand the amount of waste created per generator with an emphasis on tracking and measuring.

Level 1 recommendations are almost universal items that CRCOG can introduce and take action on with its existing authorities and funding sources to move forward to CCSWA including overall management of contracts (1-5 years), while Level 2 recommendations are aimed at the infrastructure needs including public/private partnerships.

Level 1 Administrative Track

1. Organize Towns to Reinstitute CCSWA	
Start Date	May 2023
Strategy	Organize member towns to formally move toward a Regional Solid Waste Authority; identify and bring together 11-12 municipalities for involvement.
Action Steps	• Brief CRCOG member towns on need to reinstitute CCSWA. • Review existing bylaws, benefits of CCSWA, and requirements for member towns. Present policies and goals.

[25]https://www.mass.gov/how-to/apply-for-a-sustainable-materials-recovery-program-smrp-municipal-grant

	• Conduct stakeholder meetings on activation process/interest • Brief stakeholders and DEEP on outcome of stakeholder meetings and present next steps.
Responsible Party	CRCOG
Completion Date	September 2023

2. Adopt CCSWA Bylaws and Goals for the Regional Solid Waste Authority	
Start Date	January 2024
Strategy	CCSWA becomes Regional Solid Waste Authority
Action Steps	• Manage and administer contracts. • Establish programs with early adopters. • Develop communications strategy with solid waste providers.
Responsible Party	CRCOG
Completion Date	September 2024

3. CCSWA Program Initiative	
Start Date	May 2024
Strategy	Identify Challenges and Opportunities
Action Steps	• Work with CCSWA members to establish priorities. • Work with DEEP to expand permitting options.
Responsible Party	CCSWA; CRCOG; CT DEEP
Completion Date	January 2025

4. Improve Data Tracking: MSW Materials Recycling and Organics	
Start Date	September 2024
Strategy	Lead a focused effort for tracking, reporting and data sharing for contracts and MSW/recycling generation.
Action Steps	• Conduct waste characterization study. • Develop communications strategy with solid waste providers.

Responsible Party	CCSWA
Completion Date	September 2025

Level 2 recommendations are aimed at the infrastructure needs including public/private partnerships and set the stage for long term development.

Level 2 Facilities and Operations

5. Focus on Organics Diversion Training/Technical Assistance	
Start Date	May 2024
Strategy	Provide support and funding/grants to accomplish cost-effective and long-term infrastructure for organics diversion at a local and regional level.
Action Steps	Encourage organics diversion opportunities and capacity development; seek funding for location and regional needs. Address gaps; prioritize collection and processing grant opportunities that need the most lift to start organics diversion and those that need to expand capacity.
Responsible Party	CCSWA CT DEEP Legislature
Completion Date	August 2026

5. Regional Planning Initiative	
Start Date	September 2025
Strategy	Identify facility needs, management and operational needs, and services/programs required.
Action Steps	Stakeholder meetings with member towns, private solid waste owners/operators and service providers

Responsible Party	CCSWA; CRCOG, CT DEEP; Private solid waste owners/operators.
Completion Date	December 2026

7. Supporting Authorities	
Start Date	September 2025
Strategy	Seek support from regulators, legislators and other COGs
Action Steps	Develop legislative initiatives to advance sustainable materials management including environmental justice.
Responsible Party	CCSWA City of Hartford Legislative Liaison
Completion Date	Continuous

Appendices

- CT State Law for Municipal Responsibilities: Chapter 446d Solid Waste Management
- HRRA Draft Concurrent Ordinance
- Resources and Collaborative Partners
- Organics Facilities
- MIRA Interview Questions

CT State Laws for Municipal Responsibilities and Contracts

CT State Law for Municipal Responsibilities: Chapter 446d Solid Waste Management[26]

Sec. 22a-220(a) - Shall make provisions for the disposal of solid waste

Sec. 22a-220c(a) - Shall notify haulers of recycling requirements

Sec. 22a-220(f) - Shall make provision for the separation of designated recyclables

CGS 22a-220(h) - Shall submit an annual recycling report to DEEP

Sec. 22a-220(i) - Shall designate a recycling coordinator

Sec. 22a-220a(d)(1) - Shall register haulers annually

Sec. 22a-220a(d)(2) - Shall collect reports from haulers annually

Sec. 22a-229(a) - Shall follow statewide solid waste plan

CT State Law For Contracts: Chapter 446d Solid Waste Management[27]

Sec. 22a-227(b)(1) - handling and disposal of all solid waste generated within the municipality…, (2) alternate disposal methods in the case of a failure of usual methods; (3) intermunicipal cooperative use of solid waste facilities; and (4) the minimization of the land disposal of solid waste.

Sec. 22a-228 - State-wide solid waste management plan. Regulations. Source reduction component. Disposal at out-of-state facilities.

Sec. 22a-229- Shall follow statewide solid waste plan

Sec. 22a-241(a) - Shall established a municipal solid waste recycling program

[26] https://www.cga.ct.gov/current/pub/chap_446d.htm

[27] https://www.cga.ct.gov/current/pub/chap_446d.htm

Contract Summarization Table of 20 Municipalities

The following table provides a high-level breakdown of the waste contracts provided for 20 municipalities.

CT Municipality	Provided Contract Summarization
Andover	**Contract Type:** Waste Hauling and Processing Agreement **Contract Holder:** Willimantic Waste Paper Co., Inc. **Contract Duration:** 07/01/2019 - 06/30/2024 (5 years) **Contract Costs:** **Municipal Solid Waste:** FY 2019/2020: $83.50/ton FY 2020/2021: $86.84/ton FY 2021/2022: $90.31/ton FY 2022/2023: $93.93/ton FY 2023/2024: $97.68/ton **Municipal Bulky Waste:** FY 2019/2020: $83.50/ton FY 2020/2021: $86.84/ton FY 2021/2022: $90.31/ton FY 2022/2023: $93.93/ton FY 2023/2024: $97.68/ton **Recyclable Material:** FY 2019/2020: $30.00/ton FY 2020/2021: $31.20/ton FY 2021/2022: $32.45/ton FY 2022/2023: $33.75/ton FY 2023/2024: $35.10/ton **Hauling (all materials):** $170/load (increasing 4% annually) *Additional equipment rental costs included in contract.*

Avon	**Contract Type:** Municipal Solid Waste Disposal and Recycling Services Agreement **Contract Holder:** Murphy Road Recycling, LLC **Contract Duration:** 07/01/2022 - 06/30/2027 (5 years, renewal term option if agreed upon) **Contract Costs:** **Controlled Acceptable Solid Waste:** FY 2022/2023: $110.00/ton FY 2023/2024: $110.00/ton FY 2024/2025: $115.00/ton FY 2025/2026: $115.00/ton FY 2026/2027: $120.00/ton **Controlled Acceptable Recyclables:** FY 2022/2023: $0.00/ton FY 2023/2024: $0.00/ton FY 2024/2025: $0.00/ton FY 2025/2026: $0.00/ton FY 2026/2027: $0.00/ton **Non-Processible Waste*:** FY 2022/2023: $125.00/ton FY 2023/2024: $128.75/ton FY 2024/2025: $135.19/ton FY 2025/2026: $141.95/ton FY 2026/2027: $149.05/ton ** If non-processible waste is brought to the facility, the hauler must return to the facility, reload the material, and dispose of the material at the sole cost of the hauler. If MRR does not discover the non-processible waste in time to reject the load, MRR will dispose of it, but the load will be tipped at the non-processible waste rate above, plus any other fees that MRR incurs for the handling and disposal of the non-processible waste. If a load has both non-processible waste and acceptable waste that cannot be separated, the entire load will be deemed non-processible.* *Additional contamination fees are described and included in the contract for specific items.*
Avon	**Contract Type:** Transfer Station Disposal of Refuse **Contract Holder:** Paine's Recycling and Rubbish Removal **Contract Duration:** 07/01/2017 - 06/30/2023 (Initial term was 3 years, contract has been renewed yearly. Current term is set to end on 06/30/2023) *Equipment rental fees included in contract.*

Bloomfield	**Contract Type:** Municipal Solid Waste Disposal and Recycling Services Agreement **Contract Holder:** Murphy Road Recycling, LLC **Contract Duration:** 07/01/2022 - 06/30/2025 (3 years, renewal term option if agreed upon) **Contract Costs:** **Controlled Acceptable Solid Waste:** FY 2022/2023: $110.00/ton FY 2023/2024: $115.00/ton FY 2024/2025: $120.00/ton **Controlled Acceptable Recyclables:** FY 2022/2023: $0.00/ton FY 2023/2024: $0.00/ton FY 2024/2025: $0.00/ton **Non-Processible Waste*:** FY 2022/2023: $125.00/ton FY 2023/2024: $128.75/ton FY 2024/2025: $135.19/ton ** If non-processible waste is brought to the facility, the hauler must return to the facility, reload the material, and dispose of the material at the sole cost of the hauler. If MRR does not discover the non-processible waste in time to reject the load, MRR will dispose of it, but the load will be tipped at the non-processible waste rate above, plus any other fees that MRR incurs for the handling and disposal of the non-processible waste. If a load has both non-processible waste and acceptable waste that cannot be separated, the entire load will be deemed non-processible.* *Additional contamination fees are described and included in the contract for specific items.*
Canton	**Contract Type:** Tier 1 Long-Term MSW Management Services Agreement for the Provisions of Acceptable Solid Waste and Acceptable Recyclables Services **Contract Holder:** Connecticut Resource Recovery Authority **Contract Duration:** 01/06/2012 - 06/30/2027 (15 years) **Contract Costs:** **Base Disposal Fee:** Per ton processing cost set by CRRA each year. Fee is uniform across all participating municipalities and is calculated without regard to the location of the participating municipality. Service discounts are applied to municipalities under the Tier 1 Long-Term Management Services Agreement. No tip fee is charged for recyclable material and a rebate may apply. **Tip Fees Provided by MIRA for FY 2018:** Tier 1 Long-Term MSW: $68.00/ton Bulky Waste: $85.00/ton
Coventry	No contract provided. According to the provided Annual Municipal Recycling Report for FY 2021-2022, Willimantic Waste Paper Co., Inc. provides MSW disposal and recycling services. All American Waste, LLC provides MSW and recyclables collection services.

Ellington	**Contract Type:** Municipal Solid Waste Disposal and Recycling Services Agreement **Contract Holder:** Murphy Road Recycling, LLC **Contract Duration:** 07/01/2022 - 06/30/2028 (6 years, renewal term option if agreed upon) **Contract Costs:** **Controlled Acceptable Solid Waste:** FY 2022/2023: $105.00/ton FY 2023/2024: $108.68/ton FY 2024/2025: $112.48/ton FY 2025/2026: $116.42/ton FY 2026/2027: $120.49/ton FY 2027/2028: $124.71/ton **Controlled Acceptable Bulky Waste*:** FY 2022/2023: $90.00/ton FY 2023/2024: $95.00/ton FY 2024/2025: $100.00/ton FY 2025/2026: $105.00/ton FY 2026/2027: $110.00/ton FY 2027/2028: $115.00/ton **Non-Processible Waste**:** FY 2022/2023: $130.00/ton FY 2023/2024: $130.00/ton FY 2024/2025: $135.00/ton FY 2025/2026: $135.00/ton FY 2026/2027: $140.00/ton FY 2027/2028: $140.00/ton **Controlled Acceptable Recyclables***:** FY 2022/2023: $87.50/ton FY 2023/2024: $90.13/ton FY 2024/2025: $92.83/ton FY 2025/2026: $95.62/ton FY 2026/2027: $98.49/ton FY 2027/2028: $101.44/ton ** Additional flat rate fees for certain bulky waste items may be applicable* *** If non-processible waste is brought to the facility, the hauler must return to the facility, reload the material, and dispose of the material at the sole cost of the hauler. If MRR does not discover the non-processible waste in time to reject the load, MRR will dispose of it, but the load will be tipped at the non-processible waste rate above, plus any other fees that MRR incurs for the handling and disposal of the non-processible waste. If a load has both non-processible waste and acceptable waste that cannot be separated, the entire load will be deemed non-processible.* *** Costs shown represent the base processing fee. MRR shall calculate a monthly single stream average commodity rate (ACR). The ACR will be used to determine the rebate to be paid to the town (MRR to retain 50% of any earnings) or the charge to be paid to MRR.
Ellington	**Contract Type:** Residential Curbside Solid Waste Collection Services **Contract Holder:** All American Waste, LLC **Contract Duration:** 07/01/2022 - 06/30/2023 (current term is 1 year, renewal term option if agreed upon) *Provided document is an amendment to the initial contract. No pricing information is included.*

Farmington	**Contract Type:** Agreement for the Provisions of Trash, Recyclables, and Bulky Waste Collection Services **Contract Holder:** Waste Materials Trucking Company **Contract Duration:** 07/01/2022 - 06/30/2027 (5 years) **Contract Costs*:** Refuse Collection (weekly): $5.95/dwelling or commercial establishment/month Recycling Collection (Bi-Weekly): $4.84/dwelling or commercial establishment/month Bulky Waste Collection**: $9.20/dwelling/collection period Hauling from transfer station: $72.00/load ** Contract costs are for FY 2022/2023. Contract costs are renegotiated every year in April for the upcoming fiscal year.* *** Bulky waste collection occurs twice per year for two consecutive weeklong periods in April in October*
Glastonbury	**Contract Type:** Municipal Solid Waste Disposal and Recycling Services Agreement **Contract Holder:** Murphy Road Recycling, LLC **Contract Duration:** 07/01/2022 - 06/30/2027 (5 years, renewal term option if agreed upon) **Contract Costs:** **Controlled Acceptable Solid Waste:** FY 2022/2023: $110.00/ton FY 2023/2024: $110.00/ton FY 2024/2025: $115.00/ton FY 2025/2026: $115.00/ton FY 2026/2027: $120.00/ton **Controlled Acceptable Recyclables:** FY 2022/2023: $0.00/ton FY 2023/2024: $0.00/ton FY 2024/2025: $0.00/ton FY 2025/2026: $0.00/ton FY 2026/2027: $0.00/ton **Non-Processible Waste*:** FY 2022/2023: $125.00/ton FY 2023/2024: $128.75/ton FY 2024/2025: $135.19/ton FY 2025/2026: $141.95/ton FY 2026/2027: $149.05/ton ** If non-processible waste is brought to the facility, the hauler must return to the facility, reload the material, and dispose of the material at the sole cost of the hauler. If MRR does not discover the non-processible waste in time to reject the load, MRR will dispose of it, but the load will be tipped at the non-processible waste rate above, plus any other fees that MRR incurs for the handling and disposal of the non-processible waste. If a load has both non-processible waste and acceptable waste that cannot be separated, the entire load will be deemed non-processible.* *Additional contamination fees are described and included in the contract for specific items.*

Granby	**Contract Type:** Curbside MSW and Recycling Collection Services **Contract Holder:** Paine's Recycling and Rubbish Removal, Inc. **Contract Duration:** 07/01/2022 - 06/30/2024 (2 years) **Contract Costs*:** Refuse Collection (weekly): $7.33/unit/month Recycling Collection (Bi-Weekly): $2.57/unit/month **Contract costs are for FY 2022/2023. Contract costs will be increased equal to the Consumer Price Index for New England per year. An additional increase of 0.125% is also included in the second year.*
Hartford	**Contract Type:** Municipal Solid Waste Disposal and Recycling Services Agreement **Contract Holder:** Murphy Road Recycling, LLC **Contract Duration:** 07/01/2022 - 06/30/2027 (5 years, renewal term option if agreed upon) **Contract Costs:** **Controlled Acceptable Solid Waste:** FY 2022/2023: $103.00/ton FY 2023/2024: $106.00/ton FY 2024/2025: $111.30/ton FY 2025/2026: $116.88/ton FY 2026/2027: $122.72/ton **Controlled Acceptable Recyclables:** FY 2022/2023: $0.00/ton FY 2023/2024: $0.00/ton FY 2024/2025: $0.00/ton FY 2025/2026: $0.00/ton FY 2026/2027: $0.00/ton **Non-Processible Waste*:** FY 2022/2023: $125.00/ton FY 2023/2024: $128.75/ton FY 2024/2025: $135.19/ton FY 2025/2026: $141.95/ton FY 2026/2027: $149.05/ton ** If non-processible waste is brought to the facility, the hauler must return to the facility, reload the material, and dispose of the material at the sole cost of the hauler. If MRR does not discover the non-processible waste in time to reject the load, MRR will dispose of it, but the load will be tipped at the non-processible waste rate above, plus any other fees that MRR incurs for the handling and disposal of the non-processible waste. If a load has both non-processible waste and acceptable waste that cannot be separated, the entire load will be deemed non-processible.* *Additional contamination fees are described and included in the contract for specific items.*

Hebron	**Contract Type:** Waste Hauling and Processing Agreement **Contract Holder:** Willimantic Waste Paper Co., Inc. **Contract Duration:** 11/13/2017 - 11/14/2022 (5 years) **Contract Costs:** **MSW:** FY 2017/2018: $67.86/ton FY 2018/2019: $69.56/ton FY 2019/2020: $71.30/ton FY 2020/2021: $73.08/ton FY 2021/2022: $74.94/ton **MBW:** FY 2017/2018: $76.93/ton FY 2018/2019: $78.85/ton FY 2019/2020: $80.82/ton FY 2020/2021: $82.84/ton FY 2021/2022: $84.91/ton **Single-Stream Recyclables*:** FY 2017/2018: $15.00/ton FY 2018/2019: $15.00/ton FY 2019/2020: $30.00/ton FY 2020/2021: $31.82/ton FY 2021/2022: N/A ** Single stream processing was increased to $30.00/ton for Fiscal Year 2019/2020 due to increased regulations, increasingly limited disposal options, tax increases, wage increases, toll increases, tariffs, and trade barriers. The market was reviewed in early 2020 to evaluate which direction it was heading. The 2020/2021 rate for single stream processing was increased to $31.82/ton. No additional information was given for the 2021/2022 rate.*
Manchester	**Contract Type:** Municipal Solid Waste Disposal and Recycling Services Agreement **Contract Holder:** Murphy Road Recycling, LLC **Contract Duration:** 07/01/2022 - 06/30/2024 (2 years, renewal term option if agreed upon) **Contract Costs:** **Controlled Acceptable Solid Waste:** FY 2022/2023: $103.00/ton FY 2023/2024: $106.00/ton **Controlled Acceptable Recyclables:** FY 2022/2023: $0.00/ton FY 2023/2024: $0.00/ton **Non-Processible Waste*:** FY 2022/2023: $125.00/ton FY 2023/2024: $125.00/ton ** If non-processible waste is brought to the facility, the hauler must return to the facility, reload the material, and dispose of the material at the sole cost of the hauler. If MRR does not discover the non-processible waste in time to reject the load, MRR will dispose of it, but the load will be tipped at the non-processible waste rate above, plus any other fees that MRR incurs for the handling and disposal of the non-processible waste. If a load has both non-processible waste and acceptable waste that cannot be separated, the entire load will be deemed non-processible.*

Manchester	**Contract Type:** Residential Curbside Solid Waste Collection Services **Contract Holder:** All American Waste, LLC **Contract Duration:** 07/01/2022 - 06/30/2023 (current term is 1 year) **Contract Costs:** Automated Refuse Collection (weekly): $6.346/dwelling/month Automated Recycling Collection (Bi-Weekly): $3.314/dwelling/month Yard Waste/Leaf Collection (Weekly): $ 0.834/dwelling/month Bulky Waste* (Scheduled Pickup): $1.029/dwelling/month Total Collection Costs: $11.523/dwelling/month Net total of 16,471 dwellings as per Town Building Department Contract Total: $11.523/dwelling x 16,471 dwellings x 12 months = $2,277,544.00 **Bulky waste collection limited to twice per year per dwelling unit.* *Collection cart fees are also included in the contract.*
Mansfield	No contract provided. According to the provided Solid Waste Ordinance, all refuse generated, produced, and accumulated or collected within the town shall be disposed of only at such transfer stations, processing facilities, or disposal areas as may be designated by the Mansfield Resource Recovery Authority (MRRA).

Marlborough	**Contract Type:** Municipal Solid Waste Disposal and Recycling Services Agreement **Contract Holder:** Murphy Road Recycling, LLC **Contract Duration:** 07/01/2022 - 06/30/2027 (5 years, renewal term option if agreed upon) **Contract Costs:** **Controlled Acceptable Solid Waste:** FY 2022/2023: $110.00/ton FY 2023/2024: $110.00/ton FY 2024/2025: $115.00/ton FY 2025/2026: $115.00/ton FY 2026/2027: $120.00/ton **Controlled Acceptable Recyclables:** FY 2022/2023: $0.00/ton FY 2023/2024: $0.00/ton FY 2024/2025: $0.00/ton FY 2025/2026: $0.00/ton FY 2026/2027: $0.00/ton **Non-Processible Waste*:** FY 2022/2023: $125.00/ton FY 2023/2024: $128.75/ton FY 2024/2025: $135.19/ton FY 2025/2026: $141.95/ton FY 2026/2027: $149.05/ton ** If non-processible waste is brought to the facility, the hauler must return to the facility, reload the material, and dispose of the material at the sole cost of the hauler. If MRR does not discover the non-processible waste in time to reject the load, MRR will dispose of it, but the load will be tipped at the non-processible waste rate above, plus any other fees that MRR incurs for the handling and disposal of the non-processible waste. If a load has both non-processible waste and acceptable waste that cannot be separated, the entire load will be deemed non-processible.* *Additional contamination fees are described and included in the contract for specific items.*
Newington	Provided documents include residential curbside refuse, residential condominium refuse, and residential recyclables collection services contracts between the town and CWPM, LLC. The contracts are unsigned and from 2006.
Plainville	**Contract Type:** Curbside Municipal Solid Waste and Recycling Collection **Contract Holder:** CWPM, LLC **Contract Duration:** 10/01/2017 - 09/30/2025 (8 years) **Contract Costs:** FY 2017/2018: $513,225.00 FY 2018/2019: $513,225.00 FY 2019/2020: $513,225.00 FY 2020/2021: $513,225.00 FY 2021/2022: $513,225.00 FY 2022/2023: $513,225.00 FY 2023/2024: $513,225.00 FY 2024/2025: $513,225.00 *Contract includes the weekly solid waste and bi-weekly recycling collection and transportation for 5,700 residential units.* *The town shall pay an additional $32,000.00 per contract year for "On Demand Collection" and disposal of bulky waste.*

South Windsor	**Contract Type:** Municipal Solid Waste Disposal and Recycling Services Agreement **Contract Holder:** Murphy Road Recycling, LLC **Contract Duration:** 07/01/2020 - 06/30/2030 (10 years, renewal term option if agreed upon) **Contract Costs:** **Controlled Acceptable Solid Waste:** FY 2021: $80.00/ton FY 2022: $80.00/ton FY 2023: $82.00/ton FY 2024: $84.05/ton FY 2025: $86.15/ton FY 2026: $88.31/ton FY 2027: $90.51/ton FY 2028: $92.78/ton FY 2029: $95.09/ton FY 2030: $97.47/ton **Controlled Acceptable Bulky Waste** FY 2021: $95.00/ton FY 2022: $100.00/ton FY 2023: $105.00/ton FY 2024: $110.00/ton FY 2025: $112.75/ton FY 2026: $115.57/ton FY 2027: $118.46/ton FY 2028: $121.42/ton FY 2029: $124.45/ton FY 2030: $127.57/ton **Controlled Acceptable Recyclables:** FY 2021: $25.00/ton FY 2022: $50.00/ton FY 2023: $77.00/ton FY 2024: $80.00/ton FY 2025: $82.00/ton FY 2026: $84.05/ton FY 2027: $86.15/ton FY 2028: $88.31/ton FY 2029: $90.51/ton FY 2030: $92.78/ton **Non-Processible Waste*:** FY 2021: $115.00/ton FY 2022: $115.00/ton FY 2023: $115.00/ton FY 2024: $115.00/ton FY 2025: $115.00/ton FY 2026: $115.00/ton FY 2027: $115.00/ton FY 2028: $115.00/ton FY 2029: $115.00/ton FY 2030: $115.00/ton ** If non-processible waste is brought to the facility, the hauler must return to the facility, reload the material, and dispose of the material at the sole cost of the hauler. If MRR does not discover the non-processible waste in time to reject the load, MRR will dispose of it, but the load will be tipped at the non-processible waste rate above, plus any other fees that MRR incurs for the handling and disposal of the non-processible waste. If a load has both non-processible waste and acceptable waste that cannot be separated, the entire load will be deemed non-processible.*

South Windsor	**Contract Type:** Refuse and Recyclables Collection and Delivery Services **Contract Holder:** All American Waste, LLC **Contract Duration:** 07/01/2020 - 06/30/2030 (10 years) **Contract Costs*:** Automated Refuse Collection (weekly): $6.13/dwelling/month Automated Recycling Collection (Bi-Weekly): $4.01/dwelling/month Bulky Waste (Once per month): $0.45/dwelling/month Metal Collection (Oncer per week, by appointment): $0.05/dwelling/month **Collection costs shown are for single-family, residential dwellings only. Additional collections costs for condominiums and mobile homes are also included in the contract. Christmas tree collection for two weeks in January is also included in the contract. Compensation due from the town will be increased by 2.5% on 07/01/2024, 07/01/2026, and 07/01/2028.*
West Hartford	**Contract Type:** Municipal Solid Waste Disposal Services Agreement **Contract Holder:** Covanta Bristol, Inc. **Contract Duration:** 07/01/2021 - 06/30/2023 (2 years, renewal term option if agreed upon) **Contract Costs*:** **Acceptable Solid Waste:** 03/31/2017 – 10/31/2017: $64.85/ton (minus $3.50/ton subsidy) 11/01/2017 – 06/30/2018: $ 66.47/ton 07/01/2018 – 06/30/2019: $68.13/ton ** Tip fees only provided for period between 03/31/2017 – 06/30/2019.* *Acceptable bulky waste disposal is included in the 2021 contract. No tip fees provided.*
West Hartford	**Contract Type:** Municipal Acceptable Recyclable Materials Services Agreement **Contract Holder:** Murphy Road Recycling, LLC **Contract Duration:** 01/01/2020 - 06/30/2024 (4.5 years, renewal term option if agreed upon) **Contract Costs*:** **Controlled Acceptable Recyclables:** 01/01/2020 – 06/30/2020: $25.00/ton 07/01/2020 – 06/30/2024: $84.65/ton **Non-Processible Waste**:** 125.00/ton for the entire contract period * Contract costs for Controlled Acceptable Recyclables represent the base processing fee. MRR shall calculate a monthly single stream average commodity rate (ACR). The ACR will be used to determine the rebate to be paid to the town (MRR to retain 50% of any earnings) or the charge to be paid to MRR. *** If non-processible waste is brought to the facility, the hauler must return to the facility, reload the material, and dispose of the material at the sole cost of the hauler. If MRR does not discover the non-processible waste in time to reject the load, MRR will dispose of it, but the load will be tipped at the non-processible waste rate above, plus any other fees that MRR incurs for the handling and disposal of the non-processible waste. If a load has both non-processible waste and acceptable waste that cannot be separated, the entire load will be deemed non-processible.*

West Hartford	**Contract Type:** Lease for the Operation, Management, and Maintenance of Yard Waste and Recycling Center **Contract Holder:** Supreme Forest Products **Contract Duration:** 09/01/2015 – 08/30/2020 (5 years, renewal term option if agreed upon) **Contract Costs:** Lessee to pay the town $1 as rent for the term of this contract period and all subsequent extensions. The town shall pay the Lessee $137,500.00 in year 1 and $112,500.00 in years 2-5 and any subsequent contract extension periods as fees associated with the process and removal of yard waste and recycled materials from the site. The payment for year 1 includes $20,000.00 in fees associated with the Lessee obtaining a general permit for clean wood processing and a leaf composting registration from CT DEEP. Lessee to operate a composting program sited at the existing West Hartford Transfer Station and shall provide 3,000 CY of finished compost per year at no charge to the town. Lessee agrees to provide the town with processed material at a discounted rate of 5% below their best commercial pricing level. The following rates were used in the first year of the lease: Dark Brown Premium Mulch - $23.50/CY; Playground Safety Fiber - $21.50/CY; Screened Topsoil - $18.00/CY. Lessee agrees to deliver compost to West Hartford residents for an additional fee of $79.50 per delivery.
Wethersfield	**Contract Type:** Municipal Solid Waste Disposal and Recycling Services Agreement **Contract Holder:** Murphy Road Recycling, LLC **Contract Duration:** 07/01/2022 - 06/30/2026 (4 years, renewal term option if agreed upon) **Contract Costs:** **Controlled Acceptable Solid Waste:** FY 2022/2023: $110.00/ton FY 2023/2024: $110.00/ton FY 2024/2025: $115.00/ton FY 2025/2026: $115.00/ton **Controlled Acceptable Bulky Waste*:** FY 2022/2023: $120.00/ton FY 2023/2024: $126.00/ton FY 2024/2025: $132.30/ton FY 2025/2026: $138.92/ton **Controlled Acceptable Recyclables:** FY 2022/2023: $0.00/ton FY 2023/2024: $0.00/ton FY 2024/2025: $0.00/ton FY 2025/2026: $0.00/ton **Non-Processible Waste**:** FY 2022/2023: $125.00/ton FY 2023/2024: $128.75/ton FY 2024/2025: $135.19/ton FY 2025/2026: $141.95/ton ** Additional flat rate fees for certain bulky waste items may be applicable* *** If non-processible waste is brought to the facility, the hauler must return to the facility, reload the material, and dispose of the material at the sole cost of the hauler. If MRR does not discover the non-processible waste in time to reject the load, MRR will dispose of it, but the load will be tipped at the non-processible waste rate above, plus any other fees that MRR incurs for the handling and disposal of the non-processible waste. If a load has both non-processible waste and acceptable waste that cannot be separated, the entire load will be deemed non-processible.* *Additional contamination fees are described and included in the contract for specific items.*

Windsor	**Contract Type:** Waste Hauling and Disposal Services for the Windsor Residential Transfer Station **Contract Holder:** Somers Sanitation, Inc. **Contract Duration:** 07/01/2020 - 06/30/2021 (1 year) **Contract Costs*:** **Municipal Solid Waste:** FY 2020/2021: $90.00/ton **Municipal Bulky Waste:** FY 2020/2021: $90.00/ton **Recyclables:** No fee provided **Hauling:** $175.00 per haul of roll-off (two 50-yard roll-offs; owned by contractor) Hauling price increases to $185.00/haul if the town installs an MSW compactor.
Windsor	**Contract Type:** Residential Curbside Recycling Collection Services **Contract Holder:** Windsor Sanitation, Inc. **Contract Duration:** 07/01/2021 - 06/30/2026 (5 years, renewal term option if agreed upon) **Contract Costs:** FY 2021/2022: $472,283.03 FY 2022/2023: $480,488.05 FY 2023/2024: $489,207.73 FY 2024/2025: $501,392.48 FY 2025/2026: $514,854.45 *Collection frequency is bi-weekly.*

HRRA Draft Concurrent Ordinance

WHEREAS, the prevailing solid waste disposal practices in the Town of Weston and in certain nearby communities could potentially result in unnecessary environmental damage, waste valuable land and other resources, and constitute a continuing hazard to the health and welfare of the citizens thereof, and present technology permits the conversion of residential and commercial solid waste into commercially valuable resources including steam and electricity, in an environmentally sound manner;

WHEREAS, the Town of Weston has entered into discussions with the City of Danbury and with the Towns of Bethel, Bridgewater, Brookfield, Kent, New Fairfield, New Milford, Newtown, Redding, Ridgefield, and Sherman regarding a regional solution to residential and commercial solid waste management and disposal, and will pursue such discussions with other cities and towns as may seek to cooperate for such purposes with the aforementioned city and towns;

WHEREAS, Chapter 103b, Sections 7-273aa to 7-27300 of the Connecticut General Statutes, as amended by the provisions of Public Act No. 85-478, provide for the creation and authorization of Regional Resources Recovery Authorities by the enactment by municipalities of concurrent ordinances.

WHEREAS, it is in the best interest of the Town of Weston to cooperate with one or more of the City of Danbury and the Towns of Bethel, Bridgewater, Brookfield, Kent, New Fairfield, New Milford, Newtown, Redding, Ridgefield, Sherman to create a Regional Resources Recovery Authority to provide a regional solution to the problems of residential and commercial solid waste, management and disposal; and

WHEREAS, it is in the best Interest of the Town of Weston that said Regional Resources Recovery Authority have the powers contained in Section 7-273bb of the Connecticut General Statutes as amended by Public Act 85-478.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN OF WESTON:

1. The provisions of Chapter 103b, Sections 7-273aa to 1-27300, as amended by the provisions of Public Act 85-478, are hereby adopted.

2. A public body politic and corporate of the State, to be known as the "Housatonic Regional Resources Recovery Authority" (hereinafter referred to as the "Authority"), constituting a political subdivision of the State of Connecticut established and created for the performance of on essential public and governmental function is hereby created for the purposes, charged with the duties and granted the powers provided in Chapter 103b, Sections 7-273aa to 7-27300 of the Connecticut General Statutes, as amended by Public Act 85-478, and Chapters 446d and 446e of the Connecticut General Statutes, as amended, which Authority is hereby designated as the Regional Resources Recovery Authority for the Town of Weston. The Authority shall be the Regional Resources Recovery Authority for the Town of Weston and for such other member municipalities as shall by ordinance concurrent herewith adopt the provisions of Chapter 103b of the Connecticut General Statutes, as amended, create the Authority and designate the Authority as their Regional Resources Recovery Authority, and such other municipalities as shall by ordinance and upon such terms and conditions as the Authority may determine, hereafter become member municipalities of the Authority.

3. The Authority is established and created for the purpose of providing solid waste management and disposal services within the region of the Authority, which shall be the region within the jurisdiction

of all of the member municipalities of the Authority, and which purpose includes providing for the disposal of residential and commercial solid waste, the financing, construction and operation of one or more solid waste disposal facilities for such purpose, and the delivery of solid waste thereto, including facilities for incineration of solid waste and production of steam, electricity and other by-products for sale to public utilities and others.

4. The membership of the Authority shall consist of one member from each member municipality of the Authority. Each such member, including each of the first members of the Authority, shall be appointed in the manner set forth in the concurrent ordinance adopted by each member municipality. Members shall serve for terms of three years, except that the first members of the Authority shall serve terms commencing July 1, 1986 and terminating as follows:

Bethel, June 30, 1987; Bridgewater, June 30, 1988; Brookfield, June 30, 1989; Danbury, June 30, 1987, New Fairfield, June 30, 1988; New Milford, June 30, 1989; Newtown, June 30, 1987; Redding, June 30, 1988 and Ridgefield, June 30, 1989;

Provided however, that members shall continue to serve until their successors are appointed and have qualified. In no event shall the terms of more than one half of the members expire simultaneously. If because of the addition or reduction of the number of member municipalities, the terms of more than one half of the members would expire simultaneously, then the terms of a sufficient number of members shall be automatically extended for a period of one year. Said extensions shall be based upon the alphabetical order of the member municipalities.

Each member municipality may appoint one alternate member of the Authority who shall act in the event of the disability or absence for any other reason of the member of the municipality. Said alternate member shall only have a voice and vote at Authority meetings if the member from said municipality is absent from the meeting.

5. The Board of Selectmen of the Town of Weston shall appoint the Weston member and alternate to the Authority. The Board of Selectmen shall fill any vacancy which occurs and may remove said member or alternate for cause. No person shall be eligible for appointment as a Weston member or alternate to the Authority unless at the time of his appointment he is an elector of the Town. Any such person who ceases to be an elector of the Town shall thereupon cease to hold said office.

6. The Authority shall operate with one hundred voting units which shall be assigned to member municipalities in proportion to each municipality's share of the total population of all members of the Authority as determined by the latest decennial federal census of population. There shall be no fractional votes and each municipality shall have a minimum of one vote. The distribution of voting units among members shall be recomputed following each decennial federal census and upon the withdrawal or termination of any member municipality or the admission of a new member municipality. All actions by the Authority shall require the affirmative vote of at least fifty-one percent of the total voting units present and voting at a duly called meeting of the Authority at which a quorum is present.

Members of the Authority holding a majority of the voting units shall constitute a quorum, provided that no quorum shall be deemed to exist unless at least fifty percent of the members of the Authority shall be present.

7. Members of the Authority shall serve without compensation but shall be reimbursed for their necessary expenses.

8. Member municipalities may withdraw from the Authority only after agreeing, in writing, to comply with the terms and conditions contained in any contracts between such municipality and the Authority, or the holders of any bonds of the Authority. No such withdrawal shall relieve such municipality of any liability, responsibility or obligation incurred by it as a member of the Authority or as a user of any of the Authority's projects.

9. The ordinance shall be deemed to be concurrent with such ordinances as shall be enacted by the City of Danbury and the Towns of Bethel, Bridgewater, Brookfield, Kent, New Fairfield, New Milford, Newtown, Redding, Ridgefield and Sherman which ordinances are not inconsistent in any material respect with the provisions of this ordinance. Said ordinance shall be deemed concurrent even though said ordinances are not adopted simultaneously by said municipalities and even though one or more of said municipalities shall fail to adopt said ordinance.

Dated this _____ day of _____, 2020 at Weston, Connecticut.

Board of Selectmen

_____

First Selectman

_____

Selectman

_____

Selectman

Resources and Collaborative Partners

Ms. Jennifer Heaton-Jones, Executive Director, HRRA 203-775-4539 jennifer@hrra.org

Mr. David Steubel, Chief of Staff, City of Hartford and serves on the MIRA Board
860-757-9527 david.steuber@hartford.gov

Mr. Peter Egan, Director of Operations and Environmental Affairs, MIRA (former position)
860-757-7725 pegan@ctmira.org

Mr. Shawn Nigel Pierce, EnviroExpress - Torrington Transfer Station
347-309-8391 nigel@enviroepxress.com

Mr. Jason Manafort, CWPM LLC (Plainville CT) - Essex Transfer Station
860-747-1335

Mr. Frank Antonacci Jr., All American Waste - Murphy Road Recycling
800-826-7952

Mr. Devin Spector, Casella - Willimantic Waste Paper Recycling
860-3910290 devin.spector@casella.com

Mr. Ben Knutson, Recycling Specialist, Hennepin County, Minnesota ben.knudson@hennepin.us

Mr. Brian Paganini, Vice President & Managing Director, Quantum Biopower,
bpaganini@quantumbiopower.com, (203) 565-6045

Mr. Brian Fleury, Executive Vice President, North Division, We Care Organics, (845) 753-2314
bfleury@wecareorganics.com

Mr. Samuel King, Marketing & Business Expansion, Blue Earth Compost,
(860) 266-7346

Organics Facilities

Hytone Farm located in Coventry is developing an anaerobic digestion (AD) and is expected to be operational in 2024. The Hytone AD project is in partnership with Ag-Grid Energy LLC, a US-based biogas project developer.[28] The AD facility is designed to receive liquid food waste and expansion plans to add food depackaging units in both Coventry and in Thompson.

[28] https://aggridenergy.com/hytone-ag-grid-digester/

MIRA Interview Questions

Please see next page.

TETRA TECH

Research Questions

To:	Peter Egan / MIRA
Cc:	RRS
From:	Debra Darby, Arie Kremen
Date:	October 25, 2022
Subject:	CRCOG Task 2: Short-Term Solid Waste Disposal Solutions

Peter,

Thank you for your time during our initial telephone call on September 12, 2022. As mentioned during that call, we would prepare written questions for your review and response.

On behalf of CRCOG, Tetra Tech is conducting research to evaluate the solid waste disposal strategies and potential options of working with MIRA. Responses to the following questions will assist Tetra Tech to devise and evaluate strategies that could rely upon expertise and experience of MIRA, building on MIRA's current offerings and ability to provide services, including expected service level, costs, and performance.

1. From MIRA's perspective, how could MIRA continue or reorganize itself to serve CRCOG?

2. If MIRA talent and administration can manage the closure of the facility and adapt itself into a regional authority to serve CRCOG, can MIRA manage these two tasks of closure and adaptation into something new? Please address the following:
    a. assets
    b. legal and environmental liabilities

3. Has MIRA considered or developed plans for alternative materials services? If so, please specify.

4. As an entity what legal and financial obligations does MIRA retain upon closure?

5. Would MIRA be interested to restructure to help shape the various solid waste management activities, including but not limited to, recycling, organics management, source reduction and reuse, facilities for pre- and processing activities.

6. Can MIRA take on the responsibilities required? Would those responsibilities, best assumed, as a stand-alone Authority or as an arm of CRCOG?

7. For long-term planning, should the public option be maintained for future development of innovative and sustainable facilities?

8. If MIRA could provide alternative waste management solutions to CRCOG, what might be the advantages and disadvantages of working with MIRA?

TETRA TECH
100 Crystal Run Road, Suite 101, Middletown, NY 10941
Tel 877.294.9070 Fax 877.845.1456 tetratech.com

9. How are biosolids currently managed? For the current biosolids management and the amount of energy investment through WTE, could there be an opportunity to generate energy and revenue through anaerobic digestion?
    a. At waste water treatment facilities (WWTF) within CRCOG?
    b. Could MIRA consider this type of AD operations?

10. Is there a synergy for biosolids management and food waste?