Introduction

The Housatonic Resources Recovery Authority (HRRA) is a regional, governmental, waste management and recycling authority serving 14 municipalities (Bethel, Bridgewater, Brookfield, Danbury, Kent, New Fairfield, New Milford, Newtown, Redding, Ridgefield, Roxbury, Sherman, Weston and Wilton) in western Connecticut, differing in geographic size, population size, designation of urban and/or rural communities, with clusters of Environmental Justice tracts. The region supports 12 municipal transfer stations for residential use. Three of these facilities are HRRA regional transfer stations for private haulers, they include Danbury, Newtown and Ridgefield. These three transfer stations accept residential and commercial MSW and Recycling from 75 registered haulers serving a population of over 266,000 people. A common thread for all 14 member municipalities is that they support their residents with a safe, convenient, affordable and sustainable method to dispose of household garbage.

Since its creation in 1986, HRRA has understood the complex systems of waste management. HRRA has deep experience understanding stakeholders' needs, at every level, from residents (consumers), waste haulers, municipal governments, producers, materials processors, legislators and businesses and their impact on the successful implementation of programs. HRRA has successfully led pilots and established on-going programs in food scraps/organics diversion, source separated glass collection, and regional collection systems for plastic film and shredded paper. HRRA staff have been leaders and supporters in the development for EPR programs in paint, mattresses, cylinders, and tires, and provides ongoing, impactful public education campaigns to support the resource recovery of these diverted waste streams.

The HRRA has been implementing food waste diversion programs for ten years; improving collection, processing and becoming more self-sustainable to demonstrate that municipalities can create a closed-loop sustainable composting system to manage food waste locally, reducing the carbon footprint of offsite disposal and contributing to the waste diversion goals of the state. We have successfully made great strides with the help of many small and large grants.

It is well known that much of the glass collected via single stream is sent more than 500 miles out of state to landfills as Alternate Daily Cover (ADC). This not only adds significant cost to tip fees, but the transportation adds an additional negative carbon footprint. As a result, the HRRA implemented a regional glass collection program in 2019 that has collected more than 2000 tons of glass to date or an average of 400 tons per year. This may seem like a great accomplishment, and although the HRRA is proud of the work in ensuring glass is recycled it's still only a fraction of the potential. The region has an estimated 2400 tons per year that is being managed through the single stream system. When collected separately, the clean, source-separated glass is recycled in the state of Connecticut to a higher, more beneficial use, either at Strategic Material and made into new bottles or fiber glass, or at Urban Mining to be made into Pozzotive. Besides ensuring the glass is recycled; it has also contributed to lowering the Single Stream Tip Fee as the contracted MRF has reduced their cost in long hauling the material to out of state landfills. The results have made a difference in the HRRA region, but we know we can do better.

Municipalities in the HRRA region have consistently demonstrated readiness to reduce municipal solid waste. All 14 HRRA municipalities are members of CCSMM (including co-chair, Matt Knickerbocker former First Selectman of Bethel, and now Town Administrator for the Town of Wilton), 11 municipalities participate in SustainableCT with 5 reaching certified sustainable town status, and 9 have established municipal food scraps recycling drop-off programs. Ridgefield and Newtown have constructed solar powered, aerated static pile composting systems to manage food scraps locally and sustainably. By the 2025-26 municipal year, 11 of the 12 HRRA transfer stations will be operating using a Unit Based Pricing system for solid waste. With the demonstrated commitment to pilot new strategies and fully implement those that work, HRRA is confident the funds awarded through the MMI grant will help alleviate some of the pressure on the state's growing waste disposal crisis.

Three HRRA communities were awarded Sustainable Materials Management grants in 2023. All three of the pilots couple food waste diversion with a unit-based pricing model for MSW. Bethel and Kent have implemented permanent food scraps drop-off programs. We are requesting in this grant an in-vessel composter for the Town of Kent. It will not only ensure the sustainability of their municipal program but offers an opportunity to partner and extend their processing capacity to adjacent, non-HRRA towns that may be thinking of starting their own municipal drop-off program. Newtown, the third SMM pilot, is moving to permanency with the 2025-26 budget year and has constructed processing capacity with an aerated static pile composting system. The HRRA supports all its member municipalities programs but much needed infrastructure is required to get to the next level.

Managing waste materials is a complex system. HRRA is pursuing all available financial support opportunities available to continue addressing this challenging system. The approach to reducing overall municipal solid waste for the region must include multifaceted solutions. Smart, consistent and easily consumed public education will help drive the success of waste reduction programs. Moving residents from a convenience mindset about trash disposal to a resource's recovery perspective is the key to diverting more, discarding less. Recycling is driven by convenient access to source separation collection channels. For many residents this means using their municipal transfer station or having access to more convenient satellite locations. By working together as a region, HRRA municipalities will be successful in minimizing the carbon footprint of material transportation, the environmental impacts on our EJ neighborhoods and the ever-accelerating costs of sustainable resource management.

Goals & Objectives

Our project has a regional focus that demonstrates food waste can be managed locally, municipal solid waste can be diverted and repurposed, and contamination in mixed recycling can be reduced while addressing the barriers that come with both rural and urban areas. The project objectives are in line with the State of Connecticut's hierarchy of solid waste management to increase source-separation, increase recycling, and composting by installing solar-powered in-vessel composting equipment, implementing a regional Reuse Exchange Shop

to encourage reuse, installing a plastic-film baler to reduce contamination, expanding glass collection programs across the region to ensure the highest beneficial use of glass, and increasing unit-based pricing at municipal transfer stations to incentivize residents to source separate and reduce their generation of MSW.

By providing convenient, 24/7 accessible drop-off locations throughout the region, HRRA will increase the diversion of glass and food scraps. Due to the lack of funding for additional infrastructure, the glass separation program has not grown. Currently, the largest prohibitor of increasing glass collection is the lack of convenience for residents to drop-off the material. Residents are limited by transfer station hours and the distance to the transfer station, especially in larger towns and rural areas where their facilities are not centrally located. We believe we could significantly increase the tonnage collected if residents had accessible, centrally located drop-off containers. We are asking in this grant for funds to increase collection capacity with more containers. Placing independent containers in a local municipal area with 24/7 access will increase access and result in higher participation. For example, the satellite container centrally located in Brookfield has demonstrated success with high participation, low contamination, and positive feedback from residents.

With food scraps making up 22-25% of the MSW stream we anticipate that our project will result in a meaningful reduction in tonnage of MSW and carbon emissions throughout the region. The HRRA region currently produces 148,000 tons of MSW annually, which means there is a potential 32,000 to 37,000 tons of organics that could be diverted. Quantum Biopower, located in Southington, CT is a 45 minute to 80-minute drive from any point within the HRRA region. New Milford Farms, although located within the HRRA region, is 32 miles or 50 minutes from our most southern member municipality. Distance from a food scraps processor increases the single largest, ongoing expense in a municipal drop-off program. As a result, an increase in collection means an increase in transportation and disposal costs.

We have proven with the Ridgefield Solar Powered Aerated Static Pile (ASP) composting system that municipalities can significantly save costs and process food scraps locally. Municipalities that build processing infrastructure ensure ongoing, sustainable operations for the food scraps drop-off program.

The Chief Elected Officials of the HRRA voted to invest in metroSTOR containers, with HRRA funds, to increase access for organics collection throughout the region. The HRRA is currently deliberating where will be the most advantageous and convenient locations for resident use. The metroSTOR's will be utilized in conjunction with municipal on-site composting systems.

Furthermore, the project proposal includes installing a solar-powered in-vessel composting system by Green Mountain Technologies at the Kent transfer station to process food scraps on-site. Processing the food scraps on-site will provide readily available compost for residents, local community groups, farmers, and municipal use which will incentivize participation. In addition, the Kent location will serve as a drop-off location to support the food scraps collected from the satellite metroSTOR's in the Northern HRRA region. The location will act as a local hub

for surrounding municipalities to be able to implement additional municipal food scraps programs.

The project proposal will honor the EPA's food waste recovery activities by addressing, through public education and collaboration, rescuing edible food from being wasted. The HRRA incorporates food waste reduction as part of our publication education materials. Through the HRRA website, waste-audits, and presentations in schools and communities, the HRRA promotes source reduction, donating to food share programs, and feeding farm animals. The ancillary benefits are many: reduced municipal solid waste; reduced carbon footprint from transporting to processing facilities; reduced future methane gas if landfilled; and provides finished product to share with residents, other municipal services departments and local civic groups. A community with the capability to municipally manage food waste is a more sustainable provider of healthy, cost-effective options for their residents to manage their household garbage.

With the proposed capacity expansion of food waste processing throughout the region, towns will be able to reduce their transportation costs to New Milford Farms and Quantum Biopower by sending their material to an HRRA Regional Municipal Processing site in either Bethel, Kent, Newtown or Ridgefield. This would help reduce the financial burden on municipalities to support food scraps drop-off programs.

To address the plastic film contamination in the recycling stream, and ensure plastic film is diverted from the waste stream, the HRRA plans to purchase a plastic film baler and create a regional network of plastic film collection at municipal transfer stations. The HRRA implemented a film collection program in partnership with CT DEEP's WRAP program in 2018. The collection of film was successful, but the program was reliant on the Material Recovery Facility collecting it and baling it on our behalf. Currently, our contracted Material Recovery Facility does not want the material to bale and sell to the market. However, the HRRA continued to encourage residents to source separate the material in hopes there would be an opportunity of funding to bale our own material and get it to TREX directly. Since that time the market price has increased from .05 cents per pound to .14 cents per pound. The revenue received from the bales will be used to help offset the cost of transportation and labor to collect the material at local transfer stations and municipal buildings.

The planned site renovations for the Ridgefield transfer station funds a permanent solution to separating construction and demolition materials and MSW bulky waste streams. The structure was originally erected in 1974 by a collection of community groups naming itself REAP (Ridgefield Environmental Action Plan), comprised of the Conservation Commission, the Health Department, the Women's Clubs, the Newcomers Club, the A.A.U.W., the Jaycees, garden clubs, Boy Scouts, and the PYE Clubs in the Jr. and Sr. High Schools. Money was raised at a "Dump Ball" in which corporate donations were solicited, and a local engineer donated a portion of the engineering services, resulting in the Paul McNamara Recycling Center. In the mid-1980's the Town of Ridgefield took over the operations. Ridgefield was diverting waste even before the Town had an official transfer station.

Over the past 50 years, no significant modifications have been made to the facility nor expansions. This application seeks funding to make long needed repairs and reconstruction to meet public safety requirements allowing for the full interior footprint to be used to start the regional Reuse Exchange Shop and plastic film collection programs to reduce waste. With the addition of this usable space, the site can efficiently and safely allow for the diversion of the cylinders and tires with the new EPR programs summer of 2025.

In 2023, site limitations and concerns for public safety abruptly stopped the impromptu swap area permittees used at the Ridgefield transfer station. Public reaction loudly voiced their dissatisfaction on social media, Board of Selectpersons meetings and emails to Town leaders. The project plan proposes to expand the transfer station to allow the facility to accept additional construction and demolition that can be sorted for reuse. The site repairs requested for the Transfer Station building floor will allow for the separate space (already a non-porous surface) to safely manage and remove reusable construction and demolition materials as well as clean bulky waste items that will be repurposed in the Reuse Exchange Shop, diverting tonnage from what is currently ending up in the MSW push/pull pit.

Material that can be source separated and salvaged such as toilets, sinks, tubs will be sent to reuse or to Urban Mining. Windows, doors and other supplies that can be reused will be placed in the Reuse Exchange Shop located at the Ridgefield Transfer Station (Recycling Center building). In addition, bulky waste items that are commonly sent to incineration will also be sorted out and placed in the Reuse Exchange Shop. The Reuse Exchange Shop will be self-sustainable through fees paid by the resident and program participants. The resident will go over the scale and pay the disposal fee. Conjunctively, people will pay a small fee when purchasing an item from the Reuse Exchange Shop. The disposal fee charged will cover the cost of disposal if the item is not safe for reuse or does not sell and must be disposed of. Additionally, the small fees will sustain the program long-term.

The Ridgefield Transfer Station will also host the plastic film baler and the regional mobile RotoBagger. The mobile RotoBagger will support the nine HRRA municipalities that currently have existing organics programs (Bethel, Bridgewater, Kent, New Fairfield, Newtown, Redding, Ridgefield, Weston, and Wilton). The bagged finished compost will improve organics management and create equitable distribution for residents, and garden groups. In addition, the bagged compost could potentially serve as an income source to help support organics programs. Larger amounts of compost for large municipal projects or for farmers will still be managed in bulk.

To support the regional collection programs, the HRRA is requesting to purchase a truck with a lift gate, in this grant application, to service the regional municipal programs. The truck will be utilized by the HRRA staff to support the programs by collecting the food scraps from the metroSTOR's and deliver to HRRA on-site composting facilities and collect/transport the plastic film from the municipalities to Ridgefield. This will help the programs to be completely self-sustainable, reduce transportation costs, and reduce carbon emissions. Instead of 12 to 14

municipal trucks and 12 to 14 separate public workers, the region would have one regional dedicated person to collect and manage the material.

By working together as a region to implement the self-sustainable goals and objectives, HRRA municipalities will make a significant impact on minimizing the carbon footprint, increasing waste reduction through source-separation, and reducing recycling contamination.

CT DEEP MMI Narrative:

1. A detailed description of the proposal, including:

a. the essential elements of the proposed facility or waste management infrastructure;
b. the components of the waste stream that will be diverted and directed towards reuse, repair, recycling, composting, or captured for other waste management options;
c. the proposed location for the subject waste management facility or infrastructure;
d. the expected municipalities, regions, and/or non-governmental entities served; and
e. an explanation of how the proposed facility or infrastructure will improve, expand, or provide waste reduction, recycling, or organics management services.

The project entails infrastructure requests that will expand overall recyclables collection and add new Construction & Demolition and bulky waste capacity at the Ridgefield transfer station; construct food waste processing capacity at the Kent transfer station; expand the current municipal collection and transport baling capability for plastic film across the region; grow source separated glass collection with satellite containers providing 24/7 accessible drop-off throughout region; establish 24/7 accessible food scraps drop-off network throughout the region, increase the amount of compost distributed, and create the region's first municipally operated Reuse Exchange Shop at the Ridgefield transfer station.

Location - Town of Kent

An in-vessel composting unit will be cited at the Kent transfer station where food scraps are collected. The in-vessel unit will be solar powered. HRRA believes that municipalities can create a closed-loop sustainable composting system to manage food waste locally, reducing the carbon footprint of offsite disposal and contributing to the waste diversion goals of the state. On behalf of Kent, the HRRA is currently in discussions to expand collection with neighboring adjacent, non-HRRA member communities to bring their material for processing therefore expanding the municipalities being served beyond HRRA. In addition, food scraps collected from the satellite metroSTOR containers in the Northern HRRA region will be transported to the Kent transfer station, rather than trucking to New Milford Farms or Quantum Biopower. This infrastructure will improve, expand, and provide waste reduction for organics management services to this part of the region and beyond. In addition, this will significantly reduce the carbon footprint of food scraps collection and reduce the operating cost to the Town. We believe food scraps should be managed locally.

Location - Town of Ridgefield's HRRA Regional Transfer Station

Site upgrades at the Ridgefield HRRA Regional Transfer Station will allow us to significantly increase collection capacity by expanding the volume and types of waste streams diverted from MSW. Renovating the existing Regional Recycling Center built in 1974 (6 years before the

permitting of MSW collection) makes possible designated collection areas for construction and demolition and MSW bulky waste materials, establishing a new regional Reuse Exchange Shop for reusable bulky waste and C&D, expansion of programs for food scraps, cooking oil, plastic film, existing EPR programs for e-waste, mattresses and paint, planned EPR programs for cylinders and tires, and housing the plastic film baler and bales which will support new regional plastic film collection points within the HRRA region. The existing structure at the Ridgefield Recycling Center is not safe for residents to enter. Renovating the existing structure with flooring, accessible doors, and repairing the roof will allow for residential use and serve as the first HRRA regional Reuse Exchange Shop. Furthermore, expanding the transfer station will allow the facility to accept additional construction and demolition that can be sorted for reuse and adds additional waste reduction goals.

Location - Town of Wilton

The Town of Wilton wishes to install a scale at the Wilton transfer station to implement a weight-based Unit Based Pricing system to weigh residential MSW and bulky MSW. A unit-based pricing model will create awareness among residents of *how much* they are disposing. In return, it can be expected that the residents will feel motivated to source separate their materials to reduce their cost of disposal.

Location – Regional

The project would entail purchasing a mobile RotoBagger for HRRA regional use. The RotoBagger will be stored at the Ridgefield Transfer Station (when not in use) but will support the nine HRRA municipalities that currently have existing organics programs (Bethel, Bridgewater, Kent, New Fairfield, Newtown, Redding, Ridgefield, Weston, and Wilton). Currently, the finished compost is placed in a public area for program participants to utilize. The residents are required to shovel the compost into buckets that they bring. This process makes it difficult to transport, measure and distribute the finished compost equitably. The bagged finished compost will improve organics management and create equitable distribution for residents, and garden groups.

All HRRA member municipalities will benefit from the satellite glass containers, plastic film separation program, and the regional Reuse Exchange Shop. The source-separation of glass, plastic film, and bulky waste in 14 towns will make a significant impact on the waste stream.

2. A description of the need for the proposed facility or infrastructure and how it has been identified, including any relevant data.

According to the 2016 Comprehensive Materials Management Strategy, Opportunities to Increase Diversion, Item e. “Organics provide the largest opportunity to increase Connecticut waste diversion.” In 2014 HRRA launched the first of its kind municipal curbside organics collection in the state in Bridgewater, CT. Today, nine HRRA municipalities have food scraps drop-off programs at their local transfer stations. Our goal is to have all fourteen HRRA member municipalities provide organics diversion that creates a regional network and approach.

In 2023-24, 181.79 tons of food waste were collected in Bethel, Bridgewater, Kent, New Fairfield, Newtown, Redding, Ridgefield, Weston, and Wilton. The need for municipalities to be more self-sustainable and keep food waste local and provide readily available compost to residents is the driver for additional regional food scraps processing systems and why facility improvements and equipment are needed. In a 2023 BioCycle study, "Food Waste Composting Infrastructure in the US", the number of full-scale food waste facilities has increased 8% (from 185 – 200) in the last five years. For Connecticut that number has been static. The HRRA region has been limited with only two options to send material to; either Quantum Biopower or New Milford Farms. The HRRA Region believes there is a strong need to provide regional municipal processing in order to increase capacity in the state of Connecticut for resident food scraps. Currently, 24.85 tons of food scraps collected in the Town of Kent are picked up by Curbside Compost and trucked to an off-site commercial facility, adding cost to an already strained material management budget. The town collected more than 390 tons of MSW in the 22-23 FY at their transfer station, given the states average, the town could divert more than 90 tons of food waste annually. Establishing an in-vessel system to process the food scraps on-site will reduce carbon emissions and increase the capacity of collection.

The second waste stream in HRRA's multifaceted approach targets glass. Based on feedback received from material recovery facilities, HRRA staff became aware that while it's convenient for residents to mix recyclables in the same bin, the sorting process for mixed recycling is less than perfect for the glass material. One of the largest contaminates in the mixed recycling stream is broken glass particles. The pieces of glass attach themselves to paper, cardboard, and other recyclables contaminating the bales and reducing their market value. The glass itself that is sorted at the MRF is contaminated with a mix of other small items such as shredded paper, bottle caps, metal, and straws. There is a cost to clean the glass before it is recycled. The reality is most of the MRF glass that does not meet the specification of Urban Mining is sent to out-of-state landfills as ADC and is never captured for recycling into new material. In addition, glass damages equipment at the MRF and in transport by accelerating the wear and tear on trucks, conveyor belts, screens, and other equipment in the sorting process.

According to the CT DEEP 2015 Waste Characterization Study, Glass comprises 17% of single stream arriving at MRFs. Through waste audits of mixed recycling loads at the transfer stations in the HRRA region, the percentage of glass material can be as high as 28%. Through a strong regional effort to reduce glass contamination, the HRRA region has been able to reduce glass contamination to 15%, but we believe we can do better.

HRRA established the glass pilot program in 2019 in three municipalities where residents source separated glass from their recyclables. Expanding to all 14 municipalities in 2021, the region has removed 1,984 tons from MSW. In the current system, 12 glass only collection containers are placed near where resident's drop-off their mixed recycling at transfer stations. Brookfield does not have its own transfer station and wanted to participate. As a result, a container is placed at the Brookfield Municipal Center, considered a satellite drop-off location. In three years, it has collected more than 40 tons of glass, averaging 1 ton a month removed from the Town of Brookfield's single stream recycling. Feedback from residents indicates that going to

the transfer station is not always the most accessible method. In some of the larger, rural municipalities, residents might have to drive 15-20 minutes or longer. In addition, residents are limited to the hours the transfer station is open. Satellite glass containers will provide a convenient, easy access solution for glass diversion in more central locations in each member municipalities and available to any HRRA resident. The success of the satellite glass container in Brookfield has demonstrated that it can be successful with low contamination.

Currently, the HRRA region does not have an end-of-life program for plastic film or bulky waste. Plastic film continues to be another large source of contamination in single stream recycling. Implementing a plastic film program will reduce recycling contamination and divert waste from the WTE plant. Currently, there are HRRA municipalities that collect plastic film separately at the transfer station. However, our contracted Material Recovery Facility no longer wants the material to bale and sell to the market. As a result, this valuable material is currently going to waste-to-energy. Implementing a regional plastic film baler will provide a system to manage the material to get it to an end-market without relying on private industry. Source-separating plastic film will help to reduce recycling contamination and divert a valuable resource from the waste stream.

The regional Reuse Exchange Shop at the Ridgefield transfer station will divert bulky waste and reusable construction items from the waste stream and encourage re-use among residents. The Reuse Exchange Shop will be the first "regional" bulky waste and construction diversion program for the HRRA region. The regional transfer station will charge residents when they dispose of bulky or C&D material. This fee is to cover the cost of materials that may not be sold in the shop. Once placed in the shop, other residents will have an opportunity to purchase items in the Reuse Exchange Shop at a very small fee. This revenue will help cover operating costs of the shop and ensure a sustainable operation without adding cost to the Town of Ridgefield.

3. If full site control for the specific location for the proposed facility or infrastructure has not been achieved, a detailed description of the status of the efforts to date to secure site control and a roadmap of steps that must be completed to achieve full site control.

HRRA has full site control of the Ridgefield Transfer Station. The HRRA has a long-term lease of the facility that dates to 1986. As a regional facility allowing residential and non-residential use, this location will be the central home to the plastic film baler and the regional Reuse Exchange Shop.

The Towns of Bethel and Kent are planning their food waste processing capabilities at their municipally owned and operated transfer stations, and as such have full control of their sites. The Town of Newtown shares responsibility with the HRRA, as Newtown's transfer station is also leased to the HRRA much like Ridgefield and has full control.
Satellite locations throughout the region will be cited for the smart containers for food scraps and the glass collection containers. Site control will be established using municipally controlled properties (town halls, fire stations, libraries or schools).

4. An estimate of the types and amounts of materials expected to be diverted annually from traditional MSW disposal means such as waste to energy and landfilling.

The MSW material we are focusing on to increase collection and diversion includes food scraps, reuseable construction and demolition, reusable bulky MSW, and plastic film.

In 2024 the nine HRRA municipal programs diverted 181.79 tons of food scraps, but we believe we can at least double that capacity to 360-400 tons per year.

As the reusable bulky and construction and demolition materials are large, heavy items, we expect to divert a significant amount of tonnage from the waste stream. The weight and volume is unknown.

The municipalities that separate plastic film collect approximately 50 pounds per week. With an implemented plastic film separation program and public education, we anticipate that number to be higher. Based on the 50-pound per week estimate, we expect to collect a minimum of 700 pounds per week/18 tons per year. However, as plastic film is light, the actual volume of material diverted is even more significant.

*5. A description of how the **feasibility** of the proposed facility or infrastructure has been evaluated, including information on the likelihood of community support and the establishment of partnerships necessary for successful implementation.*
*a. Identification of proposed acquisitions of **equipment.***

The feasibility of the proposed objectives is strongly supported. The projects have been initiated at the request of the municipalities. The Town of Kent has expressed interest in processing the food scraps on-site to produce compost for the community in addition to collaborating with surrounding communities to accept their food scraps as well.
The Town of Ridgefield supports the implementation of a regional Reuse Exchange Shop and hosting the plastic film baler for the HRRA municipalities.
The Town of Wilton strongly supports transitioning to a weight-based UBP system for residents and has expressed interest in a scale for residential use to weigh material. Furthermore, all 14 member towns are in favor of purchasing and implementing the metroSTOR's to expand the organics programs while providing convenience for residents.
Community support has been established by the existing number of residents that participate in existing waste-diversion programs, feedback from residents and the number of residents that hold permits for the municipal transfer stations. In addition, there is support from local sustainable groups who will assist with public education and promoting the programs, including four SustainableCT groups, conservation commissions, the Ridgefield Action Committee for the Environment (RACE), and garden clubs. The HRRA currently has an active Regional Recycling Task Force (RRTF) that has representatives from all 14 member towns. We will work with the RRTF as a region to develop and implement regional source separation programs.
Local food scraps collectors have agreed to collaborate and partner with the HRRA to collect the food scraps from the metroSTOR's and bring them to the transfer stations.

*6. **A description** of any proposed facility construction, facility renovations, or other improvements, including a **site plan** clearly showing all existing relevant facilities and the changes that will result from the proposal;*

Ridgefield Transfer Station Renovations

Please see the attached site plan, Town of Ridgefield, Appendix A.

The project plan proposes to expand the Ridgefield transfer station capacity to allow the facility to accept additional construction and demolition that can be sorted for reuse. Our plan includes infrastructure renovations to the floor within the transfer station house to ensure safety when tipping loads. Site improvements reconfiguring the space outside the transfer station house will create a permanent space for bulky waste and C&D collection. This change in operations supported by funds to renovate the areas in and around the transfer station house, allows the room necessary to sort and capture reusable bulky waste items and construction and demolition materials for the Reuse Exchange Shop.

The existing structure at the Ridgefield Recycling Center is not safe for residents to enter. The plan is to renovate the existing structure with code compliant flooring, additional, enlarged, accessible doors, and requisite roof repairs.

Kent Transfer Station

Please see the attached site plan, Town of Kent, Appendix B.

The changes at the Kent Transfer Station will include adding an in-vessel composting unit with solar panels. The solar panels will be posted on the two additional lean-to, achieving both upgrades in the transfer station infrastructure while adding new food scraps processing capability. Additional changes will include space for the bunkers where the compost pile will cure and for the finished compost.

*7. An explanation of how the proposal and any existing facilities and operations **tie together and complement one another;***

The member municipalities join regionally to support one another and collaborate through quarterly HRRA meetings, monthly transfer station operators' meetings and monthly Regional Recycling Task Force (RRTF) meetings. As a result, the 14 towns will continue to work conjunctively to implement the satellite self-sustainable food scraps containers, the satellite glass containers, promote use of the Regional Reuse Exchange Shop, and share the portable compost bagger. Additionally, the towns will implement a regional plastic film separation program and send the film to the baler at the Ridgefield transfer station. The truck will be utilized by the HRRA to support the programs by collecting the food scraps from the metroSTOR's to bring to HRRA on-site composting facilities and collect/transport the plastic film from the municipalities to Ridgefield.

The Ridgefield Recycling Center serves residents, non-residents, haulers, and offers a solar-powered ASP compost system. As a result, upgrading the capacity and implementing the equipment and the bulky Reuse Exchange Shop program will support the remaining 13 municipalities in the region by taking in their plastic film, accepting bulky waste and construction and demolition, and taking in food scraps from metroSTOR's.

The changes at the Kent transfer station will support the HRRA municipalities in the Northern region by accepting food scraps from local municipal drop-off programs and metroSTOR containers.

*8. The **number of estimated residents** who will be able to utilize the proposed facility or infrastructure.*

The HRRA has a population of more than 266,000 people and approximately 97,200 households. Our network of municipal transfer stations, satellite locations and the three regional HRRA transfer stations allow the capacity to ensure the proposed projects and infrastructure can accommodate the entire region. Every day, all-day access to drop-off areas for glass and food scraps will address the common cited obstacle for residents not using the municipal transfer station either due to the day(s) and hours of operation and/or proximity to their household.
The proposed projects will have an immediate impact on the residents as outlined below.

Ridgefield Transfer Station Enhancements
The Ridgefield transfer station allows access to residents and non-residents.
As a result, the entire HRRA population of over 266,000 people, plus the non-HRRA population surrounding the Town of Ridgefield, will benefit from the transfer station reconstruct to accept bulky/construction and demolition and utilize the Regional Reuse Exchange Shop.

Glass Separation Expansion Program
The entire HRRA population of over 266,000 people will benefit from the glass separation expansion program. The containers will be placed in public municipal locations and will be open to everyone at no charge, 24 hours per day, 7 days a week.

Plastic Film Baler
The plastic film baler will have an impact on all 14 HRRA municipalities, population over 266,000, plus the immediate population surrounding the Town of Ridgefield. All HRRA residents have access to a transfer station to source-separating their plastic film. In addition, the Town of Brookfield does not have a transfer station but offers plastic film collection at the Brookfield Town Hall.

Wilton Scale/Unit-Based Pricing
Installing a scale for residential use at the Wilton transfer station to convert the payment system from tickets to weight-based will have an impact on the 18,503 residents who have access to the transfer station.

Organics Program
The in-vessel unit installed at the Kent transfer station will have an immediate impact on the 2970 residents of Kent. In addition, Kent will accept food scraps from the metroSTOR's and drop-off programs from surrounding HRRA towns and collaborate with non-HRRA municipalities to accept their food scraps from their transfer stations. As a result, the estimated total

residents that will benefit from the on-site composting program at the Kent Transfer Station is a minimum of 10,000 people.

In addition, the compost bagger will have an impact on at least 2400 residents from across the region (182 tons of food scraps processed) who actively participate in the current municipal food scraps programs. With the addition of the metroSTOR units, this number is expected to increase.

The HRRA regional collection truck will have an impact on the entire region of 14 municipalities and a population of 266,000 people.

9. A qualitative discussion and, where feasible, a quantitative analysis of the ameliorating impacts on identified environmental justice issues accomplished by the proposal;

There are 25 Environmental Justice Block Groups in the HRRA region according to the 2023 data set from CT DEEP GIS maps. These are located in Bethel, Danbury, New Fairfield and Ridgefield, referenced on *Appendix C*. The two predominant drivers for the designation in these neighborhoods: 200% of the Federal Poverty Level (FPL) and high concentration of limited English proficiency (LEP) minority populations living there.
Economic Impact of proposed projects: Providing channels of free or low-cost ways to reduce household waste will benefit households with limited financial resources. Satellite locations for food scraps and glass may also prove more easily accessible than the municipal transfer station. Furthermore, utilizing the technology involved with the food scraps collections containers would be used to extrapolate user data for households in these Environmental Justice neighborhoods.

10. A description of the data gathering and record keeping systems that will be used to measure the amount of materials diverted from traditional waste disposal, and the related cost savings realized by the participating entity(ies) to report to DEEP;

The HRRA currently tracks the tonnage for MSW, recycling, and glass and organics collected separately. As a result, we will be able to track the tonnage reports as a region and for the Ridgefield Transfer Station. In addition, as we are currently tracking this material, we will be able to compare the tonnage amounts before program implantation and after. The HRRA plans to use integrated technology from the metroSTOR and another software application to track organics participation, location, and tonnage. At local transfer stations, the HRRA has installed QR Codes for residents to enter their organics data.

11. An explanation of how the project will impact the current and future operating costs of the expected municipalities, regions, and/or non-governmental entities served by the proposed facility or infrastructure, including any financial pro formas or supporting materials that have been developed.

At the time of this application there are no financial Pro Formas for the expanded diversions of glass, food scraps and plastic film beyond the savings for transportation costs for organics and the corresponding reduction in MSW tonnage. The Town of Kent will save $5,400 annually on

organics transportation costs by processing food scraps on-site. Utilizing the proposed truck to collect food scraps, all HRRA towns will save costs on food scraps collection fees.

Currently, municipal solid waste is $101.06/ton. The revenue to be generated by the plastic film is currently $.14 cents/lb paid by partnering with NexTrex Grassroots, a division of Trex Company, Inc. This is a newly created program and all projections for material collected and revenue generated are assumptions that will be adjusted at regular intervals the first year. Strategic Material is offering $14.00 per ton for source separated glass.
Food scraps recycled into compost are a potential source of future revenues which would require use of bagging equipment. The sale of excess finished compost by Bethel, Kent, Newtown and Ridgefield will generate funds used for equipment maintenance and program supplies. If the supply of finished compost exceeds what may be distributed back to residents, other municipal departments, schools, community gardens, farms and garden clubs, then the Town could sell the excess for a nominal price. This revenue could then be used toward equipment maintenance and program supplies for the food scraps program; or seed a savings account for purchase of prescreening, de-packing equipment.

12. Identified level of grant funding requested, and if the requested grant funds are to be integrated into a larger financial structure with other funding sources, a detailed description of how the grant funds would be integrated and utilized within the overall capital stack;

HRRA is seeking $1,184,750 for our infrastructure plan to develop and deploy assets that support waste reduction and diversion programs. Please reference *Appendix D* for an itemized budget.
HRRA member municipalities are aware and understand the current waste crisis. However, they are pulled to address other municipal needs in capital budgets. Municipal budgets for the HRRA towns are stretched too thin to make meaningful investment in the near term to address the state's current waste crisis. Thus, this grant funding, when awarded will not be integrated into a larger financial structure with other funding sources. The plan has been devised to set up sustainable networks that serve the broader HRRA region and will reduce municipal solid waste.

*13. The **timeline** for the development and implementation of the proposed waste management facility or infrastructure that includes a permitting timeline for all necessary federal, state and local authorizations.*
Permitting is already in place at Ridgefield and Newtown to process food scraps. Kent, upon execution of contract, will begin the process of concierge assistance with the proper permits required for a solar powered in-vessel composter. In pre-application conversations with First Selectperson of Kent, the enhanced infrastructure is welcomed.
Due to experience with past grants/municipal projects, we anticipate the projects will take 18-24 months to implement and launch.

January-March 2025

- Apply for local and state permits required to build the composting system in Kent. From experience permits can hold up projects, so it's important they are initiated immediately to not hold up building when supplies arrive.
- Apply for local permits for Ridgefield Transfer Station renovations.

- Order the equipment and supplies for the in-vessel unit and solar supplies for the on-site composting system. From experience, it can take 6-12 weeks to receive material.
- Order the food scraps toters for Kent.
- Order skid-steer for Town of Kent, needed to transport food scraps and compost,
- Purchase glass containers for HRRA municipalities.
- Purchase plastic film baler for Ridgefield Transfer Station.
- Purchase scale for Wilton.
- Purchase bagger for regional use.
- Contact solar company to initiate electrical and structural layouts.
- Contact Engineer for Ridgefield transfer station reconstruct.
- Purchase HRRA truck.

April-June 2025

- Obtain structural stamps for the Town of Kent
- Site grade and prep for in-vessel unit, Town of Kent
- Set-up in-vessel unit in Kent
- Conduct training with Kent public works on the in-vessel
- Install solar equipment in Kent, utilizing solar company and solar consultant
- Order concrete blocks for Kent
    - The cement blocks will be sourced by O&G construction, using concrete made with Pozzotive, a ground glass pozzolan and industrial filler made from recycled post-consumer glass. It is a safer, sustainable and higher-performing material that dramatically reduces embodied CO2 emissions in concrete.
- Order composting supplies for Kent
- Start processing food scraps in Kent
- Training on composting with Kent Public Works and organics paid consultant
- Collaborate with RRTF and local sustainability groups for public education
- Collect and drop-off food scraps from metroSTOR's
- Implement glass containers throughout the municipalities.
- Install plastic film baler at Ridgefield Transfer Station.
- Collaborate with Transfer station operators and RRTF to implement plastic film collection at all HRRA transfer stations.
- Begin C&D expansion capacity project at Ridgefield Transfer Station.
- Begin building renovations at the Ridgefield Transfer Station.
- Educate municipalities with organics programs on the RotoBagger and implement regional plan for bagger usage.

July-September 2025

- Continue collecting food scraps in Kent and from metroSTOR's.
- Continue public education on glass, organics, and plastic film programs.
- Continue training Kent public works on processing food scraps and compost with paid consultant.

- Distribute compost in Kent.
    - This project will use a self-sustainable solar powered in-vessel system. The solar will power the automatic mixing and aeration components. The owner and operator of New England Compost, Jeff Demers, will act as our paid consultant/teacher/advisor who will assist the Town of Kent in incorporating the proper ratio of food waste (nitrogen) to municipal leaves (carbon). Given the scale of the expected material, we will utilize the skid steer to move material.
- HRRA and Kent will collaborate with surrounding communities in Northern HRRA to bring food scraps to Kent transfer station.
- Continue transfer station renovations at Ridgefield Transfer Station.

October-December 2025

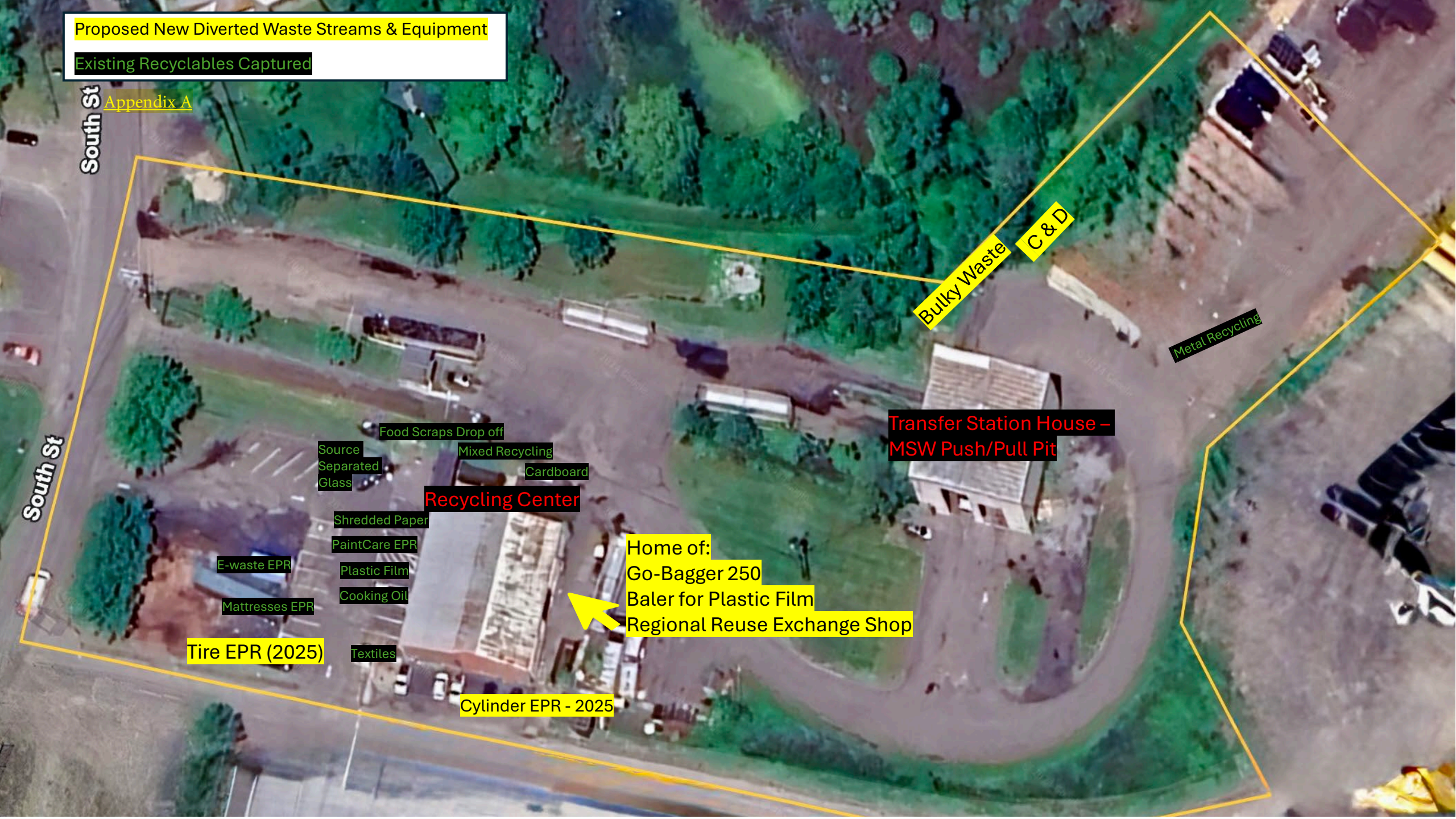
- Send compost from the Town of Kent out for testing.
- Track and monitor the glass, plastic film, and Kent organics programs.
- Track Ridgefield Transfer station enhancements.
- Continue public education.
- As Ridgefield Transfer station updates are completed, establish the Reuse Exchange Shop at the Recycling Center.
- The HRRA and RRTF will collaborate to educate the public on utilizing the Ridgefield transfer station to source separate bulky waste and construction and demolition and increase reuse of material by utilizing the Reuse Exchange Shop.
- Train Ridgefield public works on the bulky/C&D diversion and Reuse Exchange Shop programs.

January-March 2026

- Continue training and working with Ridgefield Public Works to establish the bulky/C&D diversion and Reuse Exchange Shop programs.
- Open the Reuse Exchange Shop to the public.

Applicant Contact Information:

Housatonic Resources Recovery Authority
162 Whisconier Road – Old Town Hall
Brookfield, CT 06804
Attn: Jennifer Heaton-Jones, Executive Director
jennifer@hrra.org
(203) 775-4539


Proposed New Diverted Waste Streams & Equipment
Existing Recyclables Captured
Appendix A
South St
South St
Bulky Waste
C & D
Metal Recycling
Transfer Station House –
MSW Push/Pull Pit
Food Scraps Drop off
Source
Separated
Glass
Mixed Recycling
Cardboard
Recycling Center
Shredded Paper
PaintCare EPR
E-waste EPR
Plastic Film
Cooking Oil
Mattresses EPR
Tire EPR (2025)
Textiles
Cylinder EPR - 2025
Home of:
Go-Bagger 250
Baler for Plastic Film
Regional Reuse Exchange Shop

Appendix B


S Kent Rd
341
S Kent Rd
Kent Transfer Station
Recently viewed
ark
22

Appendix B

Town of Kent Transfer Station - Solar Powered Composting System Proposal

Appendix C

Environmental Justice Block Groups 2023

GEOID	Census Block Group	Percent Population Below 200% FPL	Percent Population Minority	Percent Households LEP	Town	Town Number	Shape__Area	Shape__Length
90012002004	Block Group 4, Census Tract 2002, Fairfield County, Connecticut	79.79359044	54.80717002	14.81481481	Bethel	9	11813576.68	16310.267408400400
90012002001	Block Group 1, Census Tract 2002, Fairfield County, Connecticut	41.58699809	30.04739336	1.20603015	Bethel	9	29600937.032836900	25083.167968462400
90012102022	Block Group 2, Census Tract 2102.02, Fairfield County, Connecticu	59.85239852	91.66666667	25.6	Danbury	34	3768556.998657230	10294.842965949300
90012102012	Block Group 2, Census Tract 2102.01, Fairfield County, Connecticu	40.36939314	59.63060686	15.24663677	Danbury	34	5274842.006896970	10315.82139344520
90012101021	Block Group 1, Census Tract 2101.02, Fairfield County, Connecticu	58.74049946	72.63843648	19.96927803	Danbury	34	2986840.5556640600	9340.779649814770
90012112012	Block Group 2, Census Tract 2112.01, Fairfield County, Connecticu	33.34864492	80.11024345	21.08108108	Danbury	34	8292695.397155760	12746.574247532500
90012101012	Block Group 2, Census Tract 2101.01, Fairfield County, Connecticu	32.93023256	76.05504587	26.80115274	Danbury	34	3290389.9229126000	9966.326848761480
90012102023	Block Group 3, Census Tract 2102.02, Fairfield County, Connecticu	37.04797048	87.23247232	57.33695652	Danbury	34	6016585.682556150	12129.539439244700
90012102021	Block Group 1, Census Tract 2102.02, Fairfield County, Connecticu	50.7223114	58.60805861	52.35602094	Danbury	34	3038109.323913570	8611.241652242140
90012102011	Block Group 1, Census Tract 2102.01, Fairfield County, Connecticu	30.92406221	61.9047619	37.12737127	Danbury	34	7514863.471862790	15308.901391809900
90012101022	Block Group 2, Census Tract 2101.02, Fairfield County, Connecticu	60.39016115	68.97274633	44.04040404	Danbury	34	3606967.0080566400	9128.433194182800
90012106004	Block Group 4, Census Tract 2106, Fairfield County, Connecticut	37.53521127	36.64955071	10.51829268	Danbury	34	6617747.402038570	10449.178395883500
90012105011	Block Group 1, Census Tract 2105.01, Fairfield County, Connecticu	40.23035788	50.18510901	9.27573062	Danbury	34	75055602.68	49131.1630312355
90012104023	Block Group 3, Census Tract 2104.02, Fairfield County, Connecticu	78.5997358	46.4993395	22.32142857	Danbury	34	17467706.301513700	20434.52462726870
90012103003	Block Group 3, Census Tract 2103, Fairfield County, Connecticut	63.52313167	80.54263566	35.31073446	Danbury	34	6774399.557739260	12386.142428298700
90012103001	Block Group 1, Census Tract 2103, Fairfield County, Connecticut	31.73207037	40.87542088	20	Danbury	34	7670909.123718260	12751.885393759900
90012106001	Block Group 1, Census Tract 2106, Fairfield County, Connecticut	55.39983512	60.22258862	5.85480094	Danbury	34	12251172.584899900	21166.97034643330
90012107021	Block Group 1, Census Tract 2107.02, Fairfield County, Connecticu	41.51857835	52.05977383	18.07081807	Danbury	34	7915622.377	12884.95262921890
90012106003	Block Group 3, Census Tract 2106, Fairfield County, Connecticut	46.23415362	87.76871757	54.65838509	Danbury	34	3939764.973022460	8217.422305517090
90012107012	Block Group 2, Census Tract 2107.01, Fairfield County, Connecticu	48.66714697	68.29351536	29.05198777	Danbury	34	7551089.911376950	15611.352584144700
90012110001	Block Group 1, Census Tract 2110, Fairfield County, Connecticut	30.76229138	48.81854659	0	Danbury	34	53620711.54	36882.385083475900
90012114002	Block Group 2, Census Tract 2114, Fairfield County, Connecticut	44.89194499	31.82711198	8.1799591	Danbury	34	26062688.139465300	27027.192624495100
90012107011	Block Group 1, Census Tract 2107.01, Fairfield County, Connecticu	68.56143419	82.11805556	38.1031614	Danbury	34	3012172.8770752000	7066.431835962500
90012201003	Block Group 3, Census Tract 2201, Fairfield County, Connecticut	42.7672956	6.21069182	0	New Fairfie	91	12221139.93	15278.106843206400
90012456003	Block Group 3, Census Tract 2456, Fairfield County, Connecticut	60.95526914	5.07960576	0	Ridgefield	118	62035464.05	39829.61156215050
90012456001	Block Group 1, Census Tract 2456, Fairfield County, Connecticut	37.78705637	0	0	Ridgefield	118	16364549.502685500	17267.761991925800

APPENDIX D - budget detail

Municipality	Item	MMI Budget
	FOOD WASTE	
Kent	In-vessel composter for Kent	$ 175,000
Kent	Footings for Solar Panes	$ 10,000
Kent	Site grade and prep for in-vessel system	$ 7,500
Kent	Solar panels for In-vessel, solar plan and delivery	$ 23,000
Kent	Labor to install solar equipment	$ 15,000
Kent	Galvanized Steel pipe for solar mount	$ 2,400
Kent	Solar Mount	$ 4,000
Kent	Batteries Lithium Ion (for solar)	$ 13,400
Kent	Shed to store solar equipment (required to be protected from weather elements)	$ 5,000
Kent	Cable (for solar)	$ 100
Kent	AC Breaker Panel - Square D 100 Amp 8-spaces 16 circuit (for solar)	$ 45
Kent	Sigma ProConnex 3/4-inch Die Cast Zinc Clamp-on (for solar)	$ 5
Kent	Square D 7 terminal aluminum ground bar kit (for solar)	$ 10
Kent	Square D QO 15-Amp 1-pole standard trip circuit (for solar)	$ 36
Kent	Square D Homeline 15-amp 1-pole tandem (for solar)	$ 12
Kent	Trommel $22,300 + $2000 shipping	$ 24,300
Kent	64-gallon toters x 4	$ 800
Kent	Cement pad (under in-vessel)	$ 1,500
Kent	Concrete blocks $100/block x 20 blocks (bunkers for compost piles)	$ 2,000
Kent	Compost Thermometer	$ 225
Kent	Compost testing	$ 1,342
Kent	CV Compost - Compost Covers + shipping	$ 433
Kent	CT DEEP Permit fees $500	$ 500
Kent	Electrical and zoning stamp $450	$ 450
Kent	Structural engineering stamp	$ 525
Kent	Rake (for compost)	$ 30
Kent	Shovel (for compost)	$ 25
Kent	Weeder Hoe (for compost)	$ 40
Kent	New England Compost - organics consulting - $500 month (18 months)	$ 9,000
Kent	Solar-21st Century Electricity Consulting - 6 hours	$ 600
HRRA Region	Rotochopper Rotobagger 250	$ 80,000
Kent	Skidsteer with fork attachment to moving food scraps/compost	$ 55,238
	GLASS	
HRRA Region	Open top containers 20-yard containers	$ 45,500
HRRA Region	Permanent glass container - HRRA logo	$ 875

	PLASTIC FILM		
Ridgefield / HRRA Region	Baling equipment - baler, shipping, installation and training	$	18,000
HRRA Region	Rack N Pak systems	$	859
	RIDGEFIELD REGIONAL TRANSFER STATION Upgrades & Regional Ridgefield Exchange	**Capacity**	
Ridgefield	Site prep for expanded C&D collection at Transfer Station - pull material for swap shop	$	35,000
Ridgefield	Reconstruct Recycling Center - new exterior skin, roof, access doors, etc.	$	320,000
Ridgefield	Repair Recycling Center floor - Regional Reuse Exchange	$	112,000
Ridgefield	Repair floor of Transfer Station - bring to current standards	$	85,000
	UNIT BASED PRICING		
Wilton	Scale wired to computer - weigh residential waste	$	20,000
	REGION COLLECTION TRUCK		
HRRA Region	Truck w/Lift Gate	$	115,000
		TOTAL	**$ 1,184,750**